FLORIDA GROWER and Rancher

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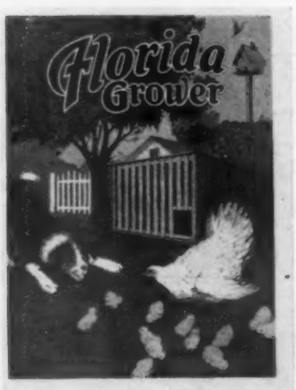

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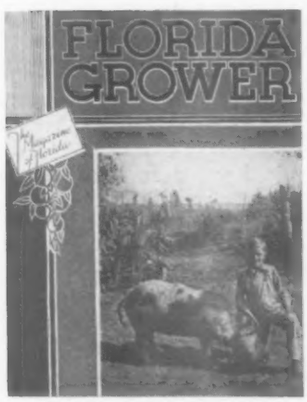

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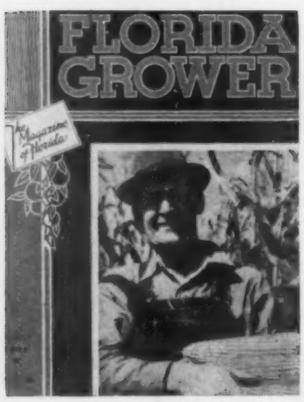

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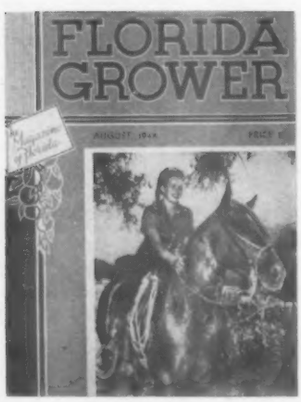

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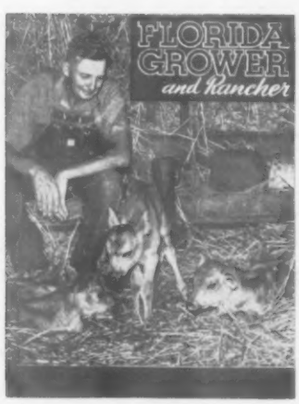
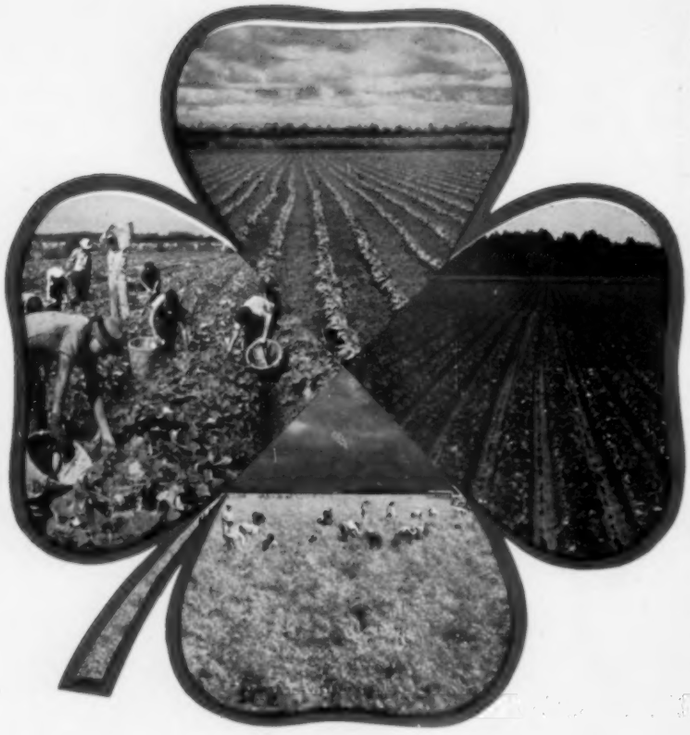


1953

50 YEARS WITH FLORIDA AGRICULTURE

OCTOBER 1958 Price 10c



When it comes to vegetables

GROW FOR QUALITY

(It's the Best Profit Insurance You Can Have)

High yield per acre is always important, but when it comes to vegetables, quality is the surest key to better profits. But, you can be more sure of both yield and quality by using Ideal Fertilizers with organic nitrogen from higher grade sources together with other proved ingredients for complete, continuous crop diet, and by safe-guarding against damage with FASCO proven pesticides.

Almost as important as these fine products is the service that stands behind them . . . agronomists, horticulturists, entomologists, plant pathologists and chemists working on Florida's agricultural problems—and yours—serve you through your W & T Representative.

IDEAL FERTILIZERS AVAILABLE WITH GENUINE PERUVIAN GUANO

So, for both high yield and quality vegetables this season, depend on Ideal quality Fertilizers, FASCO proven Pesticides and the capable assistance of your W & T Representative. Give him a call today.

IDEAL FASCO

WILSON & TOOMER FERTILIZER COMPANY

Plants in Jacksonville, Tampa, Cottondale, Port Everglades

GENERAL OFFICES • JACKSONVILLE, FLORIDA

FLORIDA AGRICULTURAL SUPPLY COMPANY

The Cover . . .

We are—and, we believe, justifiably—proud of our fifty years of service to Florida agriculture. Therefore it is only fitting that our Golden Anniversary cover show typical covers which appeared on this magazine during the past five decades.

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COMING EVENTS

Oct. 3-5: Columbia Rodeo, Lake City.
Oct. 13-14: Junior Livestock & Poultry Show, Ocala.
Oct. 19-25: Inter-State Fair, Pensacola.
Oct. 20-25: Suwannee County Fair & Livestock Show, Live Oak.
Oct. 27-Nov. 1: Bay County Fair, Panama City.
Oct. 28-Nov. 1: North Florida Fair, Tallahassee.
Oct. 29: Ayshire Sale, Dade City.
Oct. 29-31: State Horticultural Society meeting, Clearwater.
Oct. 30-Nov. 1: Dairy Plant Manager Processors' course, Gainesville.
Oct. 31-Nov. 3: Nutritional Conference, Nassau, Bahamas.
Nov. 5-8: All Florida Breeders' Show, Webster.
Nov. 6: Hereford Bull Sale, Webster.
Nov. 7: Fitted Angus Sale, Webster.
Nov. 10-15: Hardee County Fair, Wauchula.
Nov. 10-15: Putnam County Fair-Youth Show, Palatka.
Nov. 13-22: Greater Jacksonville Agricultural & Industrial Fair, Jacksonville.

How smart are YOU

1. What city has given its name to the earliest known type of man?
2. Does metal expand?
3. Is a dragonfly's sting painful?
4. What state produces most of America's sugar cane?
5. About what proportion of an iceberg remains under water?
6. For whom were the Bermuda Islands named?
7. What is earth's nearest neighbor in space?
8. Is it colder at the north or south pole?
9. How many cups of butter are there in a pound?
10. What president introduced waffles to America?

(Answers on Page 40)

FLORIDA GROWER and RANCHER

TAMPA, FLORIDA — OCTOBER, 1958

Vol. LXVI, No. 10—Whole No. 1333
(Established 1908)

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BARBARA CLENDINEN, *Home Editor*
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Circulation Manager
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PORTLAND, OREGON

MEMBER FLORIDA PRESS ASSOCIATIONS & MAGAZINE PUBLISHING — APA — ABC AUDITED PAID CIRCULATION

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All Foreign Countries, 1 year, $2.50

Send subscriptions to
P. O. Box 2350, Tampa, Florida

Thirty pounds of a good legume silage will provide all the daily protein, calcium and phosphorus requirements and about three-fourths of the dry matter requirements for a 600-pound Florida steer during the winter.

In 1945, there was no fresh corn on northern markets from December through March. Now, because of increased production in Florida, it is available every month of the year.

"After I get out of here I am going to tie a string around my finger to remind me not to fall off of the barn roof again."

NEW ONE-SPRAY WAY to control bacterial and fungal diseases!

Agri-mycin 500 is a new anti-bacterial, anti-fungal spray that gives your fruit double protection with one spraying!

Experiment stations report getting over 200% greater yields of unblemished, premium-size fruit with Agri-mycin 500 than from diseased check plots! Better size fruit, less cracking and scarring!

bacterial spot, early blight, late blight, septoria leaf spot, anthracnose and leaf mold . . .

bacterial spot, anthracnose and leaf mold . . .

bacterial blight, late blight, early blight and leaf spot diseases . . .

Agri-mycin® 500*
Pfizer
ANTIBIOTIC COPPER SPRAY POWDER
for Control of Certain Plant Diseases
Active Ingredients
Streptomycin . . . 1.76%
Copper (in Basic Copper Sulfate) expressed as metallic . . . 42.40%
Oxytetracycline† . . . 0.18%
Total Inert Ingredients . . . 55.66%
Agricultural Sales Division
CHAS. PFIZER & CO.,
Brooklyn 6, New York

Agri-mycin 500 is a new exclusive patented combination of Terramycin®, streptomycin and basic copper sulfate. This combination exerts a synergistic action to give you *increased disease control* over *both* bacterial and fungal diseases!

Controlled field experiments show Agri-mycin 500 gives better control of more diseases than either antibiotics or copper used alone. For example, in tests Agri-mycin gave 93% disease control where a combination of two plain streptomycin products gave 66% control. In another test, Agri-mycin was 100% effective where streptomycin products alone showed as low as 38% disease control!

This better disease control has resulted in over 200% increase in yields over diseased check plots.

Unlike ordinary fungicide sprays and dusts that merely try to fight internal infections from the outside, Agri-mycin 500 is absorbed through cell walls. It fights disease inside plant tissues, where they start, as well as on the surface of your plants!

Get the full yield potential of your fields this fall and spring. Protect your plants and fruit against the diseases listed in the box above, with Agri-mycin 500—the new one-spray way to control bacterial *and* fungal diseases!

For growers who do not need the added protection of a copper sulfate, Agri-mycin 100—the first successful control for bacterial diseases of vegetables—is also available.

Agri-mycin® 500*

Pfizer

Chas. Pfizer & Co., Inc.
Brooklyn 6, N.Y.
World's largest producer of antibiotics

AGRI-MYCIN 500 AND AGRI-MYCIN 100 ARE NOW AVAILABLE FROM THESE FLORIDA DISTRIBUTOR LOCATIONS:

Hector Supply Co.

Miami
Homestead
West Palm Beach
Belle Glade

Florida Agricultural Supply Co.

South Miami
Orlando
Winter Garden
Sanford
Winter Haven
Lake Wales
Fort Myers
Immokalee
Bradenton
Pompano Beach
Jacksonville
Tampa
Cottondale
Fort Pierce

Kilgore Seed Company

Belle Glade
Fort Myers
Gainesville
Homestead
Ocala
Pahokee
Palmetto
Plant City
Pompano Beach
Sanford
Vero Beach
Wauchula
West Palm Beach

Francis Higel:

Forerunner of Citrus Merchandising Methods

SOME 60-ODD YEARS ahead of his time was Francis Higel, citrus pioneer and founder of Venice, Florida.

In recent years, Florida Citrus Commission advertising has stressed the beneficial values of citrus. But, and most probably all unknowingly, they followed the example set by Francis Higel in the middle 1880's.

Consider, for instance, the label reproduced here. It was used on bottles of what might possibly be the first orange concentrate made in this state.

Moreover, this "orange syrup" was just one of 12 different citrus products processed and sold by Higel. At least we may so assume from a treasure trove of old labels unearthed last year by his grandson, Clyde V. Higel of Venice.

Higel also was a forerunner of the modern merchandiser. This is indicated by the fact that all his labels had three points in common:

Each label bore a trademark: a manatee or sea cow, evidentally chosen to honor the county in which Venice was then located.

Most labels carried the legend "put up in the grove," proclaimed in bold letters "PURE FLORIDA (name of product)," and added "GUARANTEED to be carefully prepared from fine, ripe fruit."

Thirdly, each label stressed the beneficial (i.e. "medicinal") and refreshing qualities of the individual products; also their various uses.

Products which Higel thus merchandised—between 1882 when he settled in Florida and 1893 when he died in Venice—included:

"Unfermented" orange juice, orange wine, orange jelly, lime juice, lemon juice, guava butter, guava marmalade, and candied lemon peel.

Most of the products were proclaimed to be antiscorbutic. They were (according to their labels) highly recommended for fevers, rheumatism, consumption, malaria, dyspepsia, billiousness, and as tonics and stomatics.

PUT UP IN THE GROVE
TRADE ★ MARK
PURE FLORIDA
ORANGE SYRUP
GUARANTEED
TO BE CAREFULLY PREPARED FROM
PERFECT, RIPE FRUIT.
For flavoring Soda Water and hot and cold drinks: diluted with water it makes a pleasant beverage,
NOURISHING AND REFRESHING.
Highly recommended in fevers and pulmonary troubles
Prepared by F. HIGEL
VENICE, MANATEE CO., FLA.

Venetian sauce was another Higel product. It was recommended as a stimulant for "laggard appetites" and as a condiment or flavoring for "soups, gravies, curries, etc.; for fish, roast beef, game, etc."

Just what manner of man was this Francis Higel?

(Continued on Page 40)

this Asgrow *product means*
better pepper crops for you

A superior strain, developed by Asgrow to give you all the desirable features of the original, including compact plant type, heavy, concentrated fruiting habit, and resistance to tobacco mosaic, PLUS a higher percentage of blocky, four-lobed fruits.

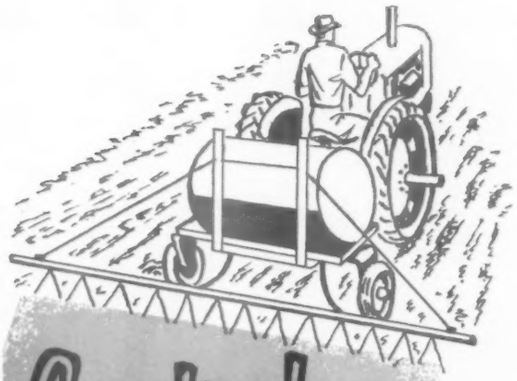
VIGORPAK PROCESSED *to give you rapid, uniform seedling emergence, better early growth under rugged field conditions.*

ARASAN TREATED *for protection against damping-off diseases.*

YOLO WONDER "A"

THE KILGORE SEED COMPANY

Florida distributors for ASGROW seeds — Main office: Plant City
Stores at: Belle Glade Fort Myers Gainesville Homestead Miami Ocala Pahokee
Palmetto Pompano Beach Sanford Vero Beach Wauchula West Palm Beach



Control FUNGUS DISEASES

Tri-Basic COPPER SULFATE

A chemically stable copper fungicide containing not less than 53% metallic copper . . . for spraying or dusting truck and citrus crops. Especially effective in controlling persistent fungus diseases. Prevent fungus diseases through application of Tri-Basic Copper Sulfate before fungus attacks.

COP-O-ZINK *(A Neutral Copper-Zinc Fungicide)*

For disease control and prevention. Particularly effective on potatoes. Also on many vegetable crops. Cop-O-Zink is excellent for correcting Copper and Zinc deficiencies and for stimulating plant growth. Contains 48% Copper and 4% Zinc. Applied to foliage in spray or dust form.

T-C DUST MIXTURES

Tennessee's Nu-Z, Nu-Iron, Nu-M and Tri-Basic Copper Sulfate are especially suited for use in preparing nutritional and fungicidal spray and dust mixtures.

TENNESSEE CORPORATION

FUNGICIDES AND AGRICULTURAL CHEMICALS

There's a superior TC product to correct most nutritional deficiencies and TRI-BASIC COPPER SULFATE to prevent and control certain persistent fungus diseases.

Correct NUTRITIONAL DEFICIENCIES

NU-IRON *(Nutritional Iron)*

A neutral Iron compound containing 30% Iron as metallic. Chelated Iron 10% as metallic—applied to foliage of plants for correction of Iron deficiencies.

NU-Z *(Nutritional Zinc)*

Nu-Z contains 52% metallic zinc . . . Can be applied directly to the plant in spray or dust form . . . Stimulates plant growth and corrects zinc deficiencies.

NU-MANESE *(Manganous Oxide)*

An extremely effective nutritional manganese product for correcting manganese deficiencies due to low manganese content of the soil . . . Applied in spray or dust form.

NU-M *(Nutritional Manganese)*

A nutritional manganese compound to be fed to the plants through direct application in spray or dust form . . . To correct manganese deficiencies and to stimulate healthier plant growth.

ES-MIN-EL

The **ES**sential **MIN**eral **EL**ements . . . Contains Manganese, Copper, Iron, Zinc, Boron and Magnesium, all essential to healthy, productive soil. Fruits and vegetables rich in vitamins cannot grow in soil poor in minerals. For soil application. Es-Min-El in spray or dust form for direct application to the plants is also available. . . . Contains nutritional manganese, Zinc and Copper.

WE WILL CUSTOM MIX MINERAL MIXTURES TO YOUR OWN SPECIFICATIONS IN LARGE OR SMALL QUANTITIES

For Information on These Nutritional Products, Write, Wire or Phone Us.

TENNESSEE CORPORATION

617-629 Grant Building, Atlanta, Ga.

State Horticultural Society To Meet October 29-31

MORE THAN 100 informative papers will be presented during the Florida State Horticultural Society's 71st annual meeting in Clearwater this month.

Fort Harrison Hotel will be the site of the October 29-31 meeting. Registration will take place on Wednesday morning, October 29.

The organization's general session will be held on Thursday morning. Key addresses at that time will be made by Dr. A. F. Camp, Society president, and Warren O. Johnson, meteorologist-in-charge, Federal - State Frost Warning Service, Lakeland.

Dr. Camp, who retired in 1956 as director of the Lake Alfred Citrus Experiment Station, will deliver the annual president's message. Johnson's subject will be "Florida Freezes of 1957-58."

John Henry Logan, who retired effective September 30 as Pinellas County Agent after some 30 years with the Florida Agricultural Extension Service, will serve as toastmaster at the Thursday night annual banquet.

Vice presidents who head the **five sections** within the Society have prepared well-rounded programs for their respective segments of agriculture. The sectional heads are:

Cliff Sutton of Orlando, citrus; John Causey, West Palm Beach, vegetables; S. A. Rose, Gainesville, ornamentals; Dr. R. A. Dennison, Gainesville, processing, and Seymour Goldweber of South Miami, Krome Memorial.

Persons planning to attend the Horticultural Society meeting for the first time will find it fascinating. Dr. Ernest L. Spencer of Bradenton, Society secretary, and Dr. J. R. R. Bristow, chairman of local arrangements, point out:

"There will be five meetings simultaneously in progress in different places. Those attending may choose to sit in on all meetings of one section or visit several sections in order to hear specific subjects being discussed."

Four of the five sections will begin their programs at 2 P.M. on Wednesday and Thursday, and at 9 A.M. on Friday. Programs of the processing section, however, will begin at: 2 P.M. on Wednesday, 1:40 P.M. on Thursday, and 8:40 A.M. on Friday.

Presented before the citrus section will be 23 papers dealing with the latest developments in that industry. These will cover such timely topics as the reaction of zineb with copper compounds, rootstocks tolerant to the burrowing nematode, wind machines for frost protection, new miticides, etc.

Nineteen papers will be presented in the vegetables section. They will cover problems such as massive insecticide seed treatment, wireworm control, viruses affecting vegetables in south Florida, and other important phases of production.

Some 23 papers will be presented in the processing section. They will pertain to many phases of processing, ranging from hydro-cooling of citrus to processing sweet potatoes.

Ornamental section participants will hear 22 papers on such topics as soil fumigation, insects that bite and sting, new fungicides for gladiolus crom treatment, and many others.

The Krome Memorial section consists of many unusual but important phases of agriculture. The 25 papers presented before group will cover such subjects as growing mangos in the Everglades, feeding of frost-damaged trees, the external factors affecting the growth cycle of coffee, the lychee story, etc.

* * *

Americans ate about 340 pounds of fresh fruits and vegetables and 210 pounds of processed produce during 1956. This made up almost one-third of all food consumed.

* * *

Florida peanut acreage dropped from a high of 480,000 acres in 1939 to 128,000 acres in 1957.

S·P·M
PREMIUM
Premium quality fertilizer certified through use of a balanced combination of the water-soluble magnesium and potash obtained from
Sul·Po·Mag
(SULPHATE OF POTASH MAGNESIA)
Reg. Trade Mark I. M. & C. Corp., Chicago

Look for this identifying Seal of Approval when you buy. It's your assurance of extra-value fertilizer.

...the seal that guarantees you **won't be**

TOO LATE for TOP PROFITS

You know the penalty of a shortage of magnesium in your citrus groves. Irregular yellow blotches in the leaves signal that you will soon be faced with a marked reduction in yield, size, and quality of your fruit. And then, before you know it, *it's too late for top profits!*

You can't afford to gamble with your next harvest . . . not when positive protection, plus improved fruit flavor, can be yours for only pennies per tree. Act now to insure an adequate supply of magnesium this season by specifying fertilizer containing Sul-Po-Mag®... also called SPM . . . in your next fertilizer order.

Why SPM? Sul-Po-Mag is a combination of water-soluble, fast-acting, readily available magnesium and premium sulphate of potash. Most citrus fertilizer manufacturers make premium grade fertilizers containing Sul-Po-Mag. For your protection, look for the SPM seal.

USE FERTILIZER CONTAINING

Sul-Po-Mag® ...positive protection for only pennies a tree

Water-Soluble Double Sulphate of Potash-Magnesia
($K_2SO_4 \cdot 2MgSO_4$) 22% K_2O – 18% MgO

INTERNATIONAL MINERALS & CHEMICAL CORPORATION
POTASH DIVISION . . . . . ADMINISTRATIVE CENTER, SKOKIE, ILLINOIS

More and more growers and ranchers have proved to themselves that mixed fertilizers containing genuine Peruvian Bird Guano give outstanding results. Reason? Peruvian Guano contains 13 growth-boosting plant nutrients: nitrogen, phosphoric acid, potash, calcium, magnesium, aluminum, boron, cobalt, copper, iron, manganese, molybdenum and sodium. Anything else? You bet! Guano supplies nutrients in readily available form for quick, vigorous starts and long-lasting follow-up benefits. Whatever your crop—you can feed your land and fatten your harvest—with a mixed fertilizer containing the outstanding growth power of Peruvian Bird Guano. Substantial supplies available!

PERUVIAN BIRD GUANO

imported and distributed by

H. J. BAKER & BRO.

TAMPA, FLORIDA
ESTABLISHED 1850

Seald Sweet
SALES INC.

50 Years
Service to Florida's Agricultural Industry

Congratulations to THE FLORIDA GROWER AND RANCHER on your 50th anniversary. As a pioneer in the citrus industry you established a record of service that continues to represent the finest in the magic of the written word.

We share with you all the important memories of the half century. For the Florida Citrus Exchange is likewise celebrating its 50th anniversary.

Sometime this year the Florida Citrus Exchange, through its Seald-Sweet Sales Division, will sell its 250,000,000th box of fresh Florida citrus fruit.

In these days of fast moving markets and changing techniques, the experiences resulting from this tremendous sales record are an important asset to the many members of the Exchange organization.

To our members, as to your readers, the solid foundation and experienced maturity of these 50 years is assurance that progress shall not pass us by.

FLORIDA CITRUS EXCHANGE
TAMPA, FLORIDA

Nutrition Conference Slated

BUSINESS and pleasure will be combined when animal experts from all over the nation attend the Florida Nutrition Conference this month.

Slated for October 31 through November 3, the conference will be in the form of a cruise from Miami to Nassau. The program is co-sponsored by the Florida Feed Dealers Association and the Florida Agricultural Experiment Station.

Nationally-known animal nutrition experts and Experiment Station personnel will appear on the program. Among the 14 speeches scheduled for presentation are:

"Production and Preservation of a Winter Roughage Supply," Carl Bender, director of research in grassland farming, Sperry Rand Corp.

"Recent Developments in Beef Cattle Nutrition," Ralph McCall of The Quaker Oats Company.

"Mineral Nutrition in Ruminants," George K. Davis, director, Animal Nutrition Laboratory, Florida Agricultural Experiment Station.

"Baby Pig Nutrition," George Combs, assistant animal husbandman, Florida Agricultural Experiment Station.

Pre-Cut Seed Potatoes Coming

THE CHORE of cutting potatoes into pieces for seed may soon become a thing of the past on many farms.

Such is the happy conclusion drawn by USDA researchers from results of a test conducted last spring. Cooperating in the experiment, a commercial seed distributor supplied farmers with pre-cut seed pieces ready to plant.

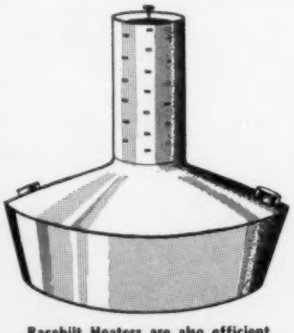
Machine-cut in Maine, the seed potatoes healed during transit and reached farmers in excellent condition. This was made possible by applying basic knowledge on temperature and humidity requirements for healing potatoes.

Potatoes heal by developing a protective layer of cork over the cut surface. This layer is an effective barrier against decay.

Pre-cut seed would save the farmer the work—and accompanying cost—of cutting seed, the experimenters point out.

Marketing research specialists believe it would also help the grower reduce costs and produce better quality seed.

Mr. Grower NOW
You Can Purchase Heaters For Your Grove
for as little as $175.00 per acre
and cut 50% from fuel and labor costs

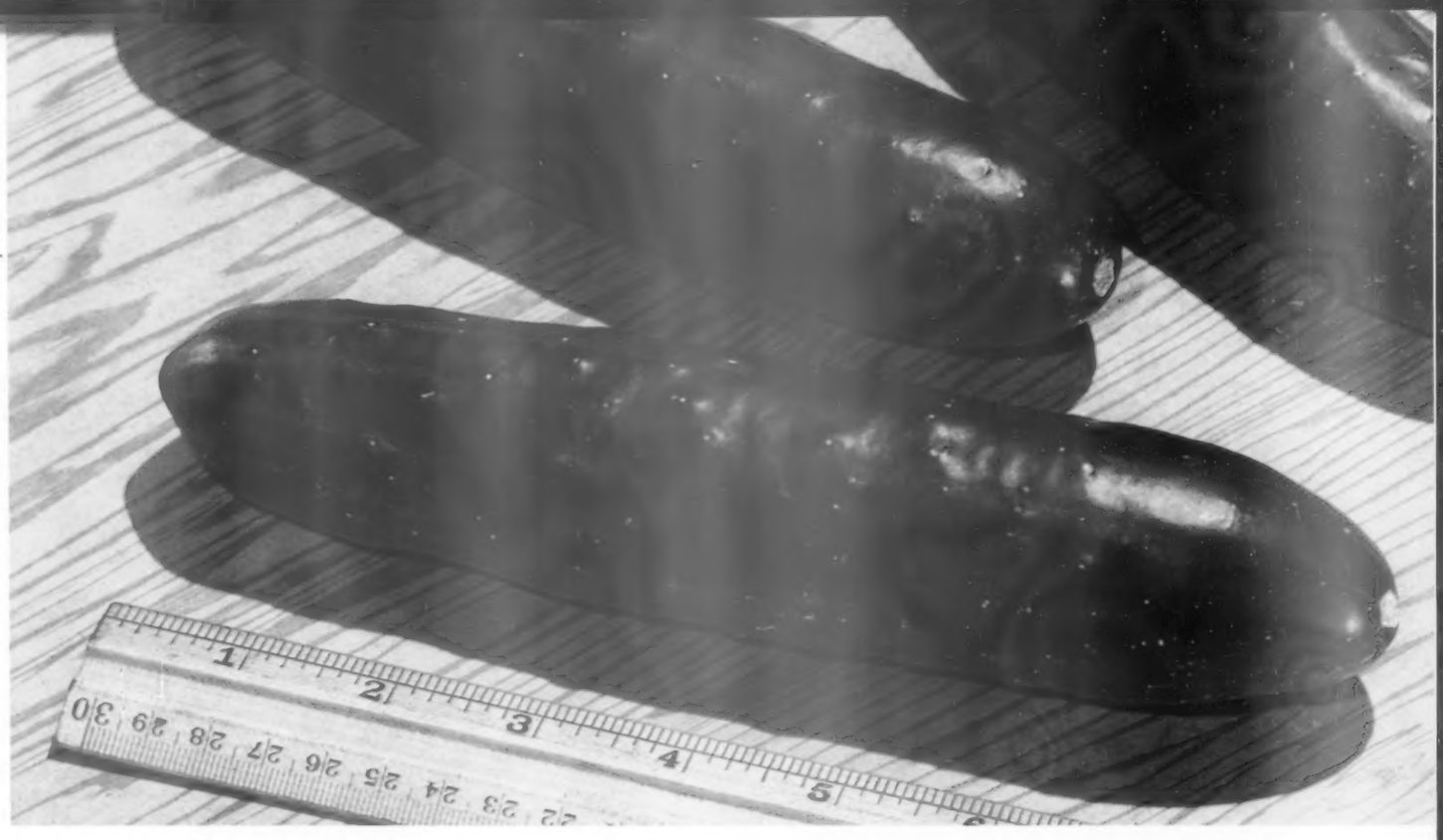


Racebilt Heaters are also efficient and economical protection for vegetable crops and home shrubbery. The low cost makes it practical for many uses.

Now a revolutionary new idea in low cost grove and farm heating efficiency. Initial investment, fuel cost, labor and maintenance are reduced more than 50 per cent over old methods now in use.
The all new Racebilt Grove Heater is small, compact and light weight. . . . Overall size is only 16 inches from fuel base to top of stack. MOST IMPORTANT OF ALL — Racebilt Heaters are designed to be placed **under** trees so all heat moves directly into the trees for maximum protection —there's no heat loss! The base of heater may be placed in a small scooped-out hole in the ground (few strokes of hoe will do it) and only 8 to 10 inches extends above ground surface. Racebilt Heaters burn practically clean and the small, compact size provides ease of storing and handling.

Racebilt
THE MARK OF QUALITY

RACE and RACE Incorporated
Manufacturers of Aluminum Pipe for Farm and Industry
Phone or Wire for Demonstration Telephone CYpress 3-4137
WINTER HAVEN, FLORIDA



PALOMAR CUCUMBER GIVES HEAVIER, EARLIER YIELD THAN MARKETER

A Ferry-Morse development and introduction that resists Downy Mildew, Palomar far outyields Marketer on unsprayed plots, and produces more No. 1 fruits at every picking, even with normal spray control. Vigorous vines bear longer, darker-green fruits—about 6 days earlier than Marketer. See your Ferry-Morse dealer.

Tailor-made for you by FERRY MORSE

LET THE GOOD EARTH PRODUCE

FERRY-MORSE SEED CO.—Detroit, Mich. • Mountain View and Los Angeles, Calif. • Memphis, Tenn. • Harlingen, Texas • Tampa, Fla.

GREENBACK Y. R. CABBAGE PRODUCES DARKER GREEN, MORE COMPACT HEADS

Another Ferry-Morse introduction, Greenback is superior for market and shipping. Heads are uniformly round, darker green and more compact than standard varieties; average 7½" in diameter. Vigorous, short-stemmed plants are slow to produce seed stalks, grow well even in soil heavily infected with Yellows. At your Ferry-Morse dealer's.

HOMESTEAD F-M TOMATO IS MORE PRODUCTIVE THAN REGULAR HOMESTEAD

This improved strain was selected from regular Homestead by Ferry-Morse breeders for larger fruit and more productive, compact plants. Highly resistant to Fusarium Wilt; maintains excellent fruit size throughout season. A superior green-wrap shipper with thick, firm walls even at the blossom end. At your Ferry-Morse dealer's.

Tailor-made for you by FERRY MORSE

LET THE GOOD EARTH PRODUCE

FERRY-MORSE SEED CO.—Detroit, Mich. • Mountain View and Los Angeles, Calif. • Memphis, Tenn. • Harlingen, Texas • Tampa, Fla.

TENDERBEST M. R. BEAN PLANTS BETTER-ADAPTED TO MECHANICAL HARVESTING

A worthy successor to Tendergreen, Tenderbest was developed by Ferry-Morse breeders for high resistance to Common Bean Mosaic, N. Y. 15 Mosaic, and Root Rot. Pods, borne high off ground, are unusually long, smooth and tender—and hold up well in storage and shipping. Plants produce over long season. See your Ferry-Morse dealer.

The *Grower*—1908-1958

People and Policies Made it Survive and Grow

OUT OF THE TRAVAIL of citrus chaos, this magazine was born 50 years ago this month. Since that time, its scope has expanded to encompass all major components of Florida's rapidly-growing agricultural industry.

At first, this magazine was called the FLORIDA FRUIT AND PRODUCE NEWS. Its first issue was published October 2, 1908 in Jacksonville.

James McComb Jr., who had had 35 years' experience in all branches of the fruit and produce business, was the editor and part owner of the new publication. A brilliant but erratic man, he held that position only slightly over three months before disposing of his interests.

Charles R. Hardy, an experienced journalist from the north, then served as editor from January 8 until September 10, 1909. When he resigned to edit the newly-founded Jacksonville Enterprise, Ben H. Doster became editor.

From the beginning, the predecessor of the GROWER constantly and vehemently urged growers to quit shipping unripe, unfit fruit and to end cut-throat internal competition through organization. This twin editorial campaign had a double-barrelled effect.

On the debit side, came a loss in advertising revenues; commission men allegedly boycotted the magazine because of its trend toward cooperation in marketing. The financial sledding became rough indeed.

Nevertheless, the editorial campaign paid off: When the Florida Citrus Exchange was organized in June 1909, its leaders lauded the magazine's efforts and adopted it as their official organ.

Moreover the Exchange formed a stock company and took over operation of the magazine, moving it to Tampa. They named Edgar A. Wright as editor and he assumed that position November 4, 1910.

Effective with the February 3, 1911 issue, the magazine's name was changed to FLORIDA GROWER.

The following years saw many changes in the magazine and in the agricultural industry in the state. Highlights of those formulative years—between 1910 and 1935—are related on pages 12 and 13 by former editors Russell Kay and Marvin Walker.

On June 27, 1925, the Exchange sold the FLORIDA GROWER and Florida Grower Press to the late Charles G. Mullen (Sr.) and Jerome A. Waterman. Since that time, the GROWER has been an independent periodical. In 1950, the Mullen family bought out Mr. Waterman's interest.

John F. Cunningham purchased an interest in the GROWER in 1932; several years later he bought controlling interest and hoped to personally edit it himself. But shortly afterwards he was named dean of agriculture at Ohio State University and was never able to move to Florida. He sold the magazine back to Mr. Mullen in 1940.

Mr. Cunningham, however, was not unknown to GROWER readers. For some 21 years, until his death in April 1953, he wrote a homespun monthly column—"The Chimney Corner" signed J.F.C.—which was a favorite.

Upon the death of Mr. Mullen in April 1950, his two sons took over his printing and publishing business. Charles G. Mullen Jr. became president of Florida Grower Press, Inc. Harris H. Mullen became publisher of the GROWER.

Bert Livingston, now garden editor of the Tampa Morning Tribune, became associate editor of the GROWER in March 1938. He served as managing editor from December 1942 until late summer 1950.

An experienced journalist, Mr. Livingston came at a critical era in Florida agriculture. His professional and capable approach to agricultural editing meant much to the GROWER and to Florida agriculture.

Frank Lovering, who had had many years of newspaper experience succeeded Mr. Livingston as managing editor. His wide and enthusiastic interest in varied fields manifested itself in many a GROWER story. Mr. Lovering retired in April 1956 to return to his native home in New Bedford, Massachusetts.

Thomas J. Hughes, current agricultural news editor, has been associated with the GROWER since January 1951. Alice Tompkins, feature and layout editor, joined the staff in April 1956.

Lucille Lucas, who has been associated with the GROWER since July 1934, became circulation manager in April 1952.

As it increased in size and circulation the GROWER's departmental services to readers increased also. The present Farm Home Section, for instance, was inaugurated in April 1951.

Lucy O'Brien, an experienced journalist and former women's editor of the Tampa Tribune, became the GROWER's first woman's editor. She was succeeded in December 1955 by Barbara Clendenin, the winner of several national prizes for food writing and 10 years Tribune food editor.

Effective with the August 1953 issue, the magazine's name was changed to include the words *"and* RANCHER." This was done because cattlemen felt that the word "grower" left them out — even though the GROWER had been carrying cattle news and information for many years previously.

From the beginning—first as a weekly for some 20-odd years and then as a monthly—the GROWER has always had the same size page. And it has always been 10 cents a copy.

In the October 1952 issue, the GROWER proudly displayed the ABC (Audit Bureau of Circulations) emblem on its masthead. This seal is the advertiser's assurance of the circulation integrity of the magazine.

Another first was chalked up when the GROWER became the first—and only—state publication in the South to be admitted to the Agricultural Publishers Association. This occurred in January 1955.

Still further honors were heaped on the GROWER last September when it received the general excellence award, letter press division, in the first annual Florida Magazine Contest sponsored by the Florida Association of Magazine Publishers.

From its inception—when its editorial campaign urged growers to organize and may have been an important factor in the forming of Florida Citrus Exchange—the GROWER has done its best to aid grower interests.

The GROWER, for instance, was primarily responsible for obtaining additional Med-fly eradication funds in 1930. An article in the May 1930 GROWER sparked so many letters and telegrams from indignant readers that Washington increased the funds to meet eradication needs.

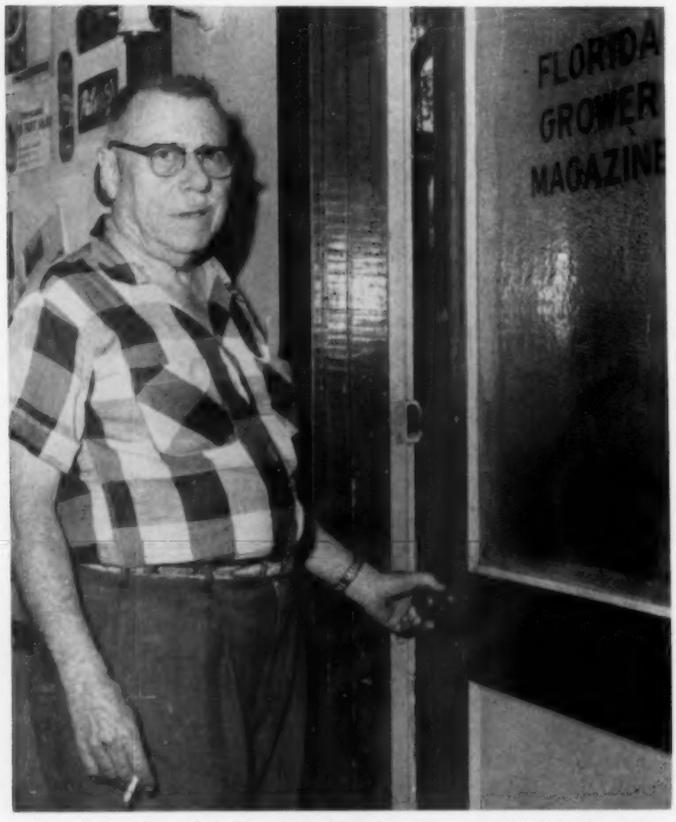
In 1934, state agricultural appropriations were endangered. But the GROWER engineered the lobby of more than 200 delegates that went to Tallahassee and demanded their restoration. This was accomplished; as a result, plant board, agricultural extension, tick eradication and other activities were continued.

Moreover, the GROWER has consistently fought for assistance to Florida agricultural education and reasearch facilities. In early 1957, the GROWER successfully campaigned to help raise the salary level in the College of Agriculture, the Experiment Stations, and Extension Service.

It has been the special aim and policy of the GROWER to assist Florida agriculture by allowing the most qualified scientists, researchers and agricultural workers to speak through its columns.

. . . . yesterday and today . . . .

Although only 17, Joe Johnston—now Grower press room foreman—was a two-year veteran as he served his apprenticeship in *1914* (left picture, at the drum press) under the watchful eyes of Elmer Tucker (in overalls), Carl W. Hill Printing Co. foreman. He is shown today (right) adjusting one of the Grower Press' automatic cylinder presses—still on the job after 46 years!



Russell Kay, dean of Florida weekly journalists, was associated with the weekly *Florida Grower* in various capacities from *1914* until *1925*. Thereafter he did free-lance publicity, sold some real estate and managed a swimming pool during the boom.

In *1929*, the Florida Press Association sent him to Tallahassee to cover the Legislature for the state's weekly newspapers. Broadening the scope of his subject matter, he continued to write free columns—today titled "Too Late to Classify"—for the weeklies even after buying the Florida Clipping Service and moving to Tampa in *1930*. He purchased the Florida Newspaper News and Radio Digest in about *1945*.

Secretary of the Florida Press Association for some *30* years, he also has been secretary of the Florida State Fair for a number of years. He went into semi-retirement this past January.

Two Early Editors

The Formulative Years

1914–1925

By Russell Kay

By constant and frequent visits to agricultural communities around the state, its editors built up confidence and good-will in the Florida Grower.

THE FLORIDA GROWER brought me to Florida as a youngster in 1914. I came from California to work for my uncle, Edgar A. Wright, then editor and manager of the publication.

Controlling interest in the magazine–which had been operated more as a house organ than a real agricultural journal – was then owned by the Florida Citrus Exchange.

Wright was employed by the Exchange to make a real farm journal out of the publication. He was given full authority to handle it in any manner he chose, the only stipulation being that it remain friendly to the Exchange and support the effort being made to organize the citrus industry.

The magazine was published weekly at that time. It ran about 16 to 20 pages with limited advertising support.

Wright realized that the success of the publication–as well as its ability to serve the Exchange–rested on the confidence and goodwill of all agricultural interests in the state, particularly that of the growers.

"You can't edit a successful farm publication from an office easy chair," he always contended.

So he made it a point to spend as much time as he could visiting agricultural communities, meeting the growers, studying their problems, and working shoulder to shoulder in an effort to find a solution.

Moreover, he began running feature articles describing the various areas or towns he visited each week. For this "Just Gossip" series he took the by-line of "The Stroller" and became known by that title.

Chambers of commerce and civic leaders were as eager for publicity in those days as they are now. Communities, consequently, were eager for a visit from "The Stroller" as it meant favorable publicity.

In all of his efforts, Wright made the glory and grandeur of the state as a whole the dominant theme. Thus, his well-received descriptive stories of the various towns helped to break down sectionalism and make for better understanding among groups and areas.

This man's sincerity, faith and courage, coupled with his humble leadership, did much to lay the groundwork for the great citrus and agricultural development that is ours today.

When I went to work for the FLORIDA GROWER, the publication was printed on contract by the Carl W. Hill Printing House of Tampa. The business was housed in four cubby-hole offices above the printing plant in a rickety old building on Cass Street, between Franklin Street and Florida Avenue.

A year later, our printer moved into a new building on Florida Avenue. He then provided us with more sumptuous offices which had been arranged in advance to meet our requirements.

B. L. Hamner became advertising manager. He soon established national representation in Atlanta, New York and Chicago.

Circulation was increasing, and the little publication gained influence. And the FLORIDA GROWER was on its way to becoming a full-fledged nationally-recognized agricultural medium.

Working in the circulation department, I noted that we were developing a sizeable out-of-state circulation and that people everywhere were interested in the state as prospective homeseekers and investors.

In order to further develop this type of circulation, we placed

EDGAR A. WRIGHT

modest advertisements in metropolitan newspapers and magazines. Headed "The Truth About Florida," these ads offered a three months' trial subscription for 25 cents.

The response was amazing. Subscriptions began to pour in from everywhere, accompanied by letters from folks seeking further information concerning agricultural opportunities, business chances and the like. Over half of these trial subscriptions were renewed.

Real estate dealers, anxious to contact prospective homeseekers and investors, began advertising in our magazine. And throughout Florida today are thousands who gained their first knowledge of Florida from the FLORIDA GROWER, were "sold" on the state and made it their permanent home.

The Florida of 44 years ago was a lot different from the Florida we know today. There were few automobiles and very few paved roads.

Sand trails through the woods served in most cases. And the problem of getting from "here" to "there" was a big one.

Connecting Tampa and Plant City was a nine-foot brick road. The only way to reach St. Petersburg, then considered a day's journey, was to journey around the north end of Tampa Bay via a nine-foot shell road.

A trip to Miami from Tampa was a courageous undertaking for you had to travel sand trails most of the way. The only route across the state was via Daytona Beach and usually took from three to four days.

There was little or no automobile travel from the north to Florida . . . no motels or motor courts.

However you could find lodgings in private homes along the route. I remember paying a dollar a night for a room—with breakfast thrown in the next morning.

Railroads were supreme in those days and excursions to Florida were popular. Both the Seaboard and Atlantic Coastline were active in promoting travel to the state.

Looking over an early issue of the FLORIDA GROWER I found an advertisement of the Seaboard, signed by J. A. Pride, then Industrial Agent, announcing these round-trip fares: from Washington, $25; from Chicago, $36.

(Continued on Page 38)

Relive Old Times

The Transition Years

1925–1935

By Marvin H. Walker

In the depression following the boom, The Florida Grower managed to survive and become recognized for its service to the State's farming people.

Marvin H. Walker was editor of *The Florida Grower* from July 1925 to September 1935. He left to become publicity director of the newly-created Florida Citrus Commission, and later served as general manager of that state agency for three periods. In 1949, he became general manager of the Florida Citrus Canners Cooperative at Lake Wales, the state's third largest processing plant.

In recent years, he has also served as a member of the Florida Citrus Commission, as president of the Florida Canners Association, and as president of the Florida Council of Farmer Cooperatives.

Currently, he is a member of the Executive Committee of the National Council of Farmers Cooperative and chairman of the Citrus and Subtropical Fruit Research and Marketing Committee of the U. S. Department of Agriculture.

It was in 1910 that my father, a Chicago railroad man, saw his first copy of The Florida Grower. He read one of its advertisements which said "If you have 10 acres of grapefruit, you will have plenty for the rest of your life" and decided his young son should become a citrus grower.

To make sure of it, he planted a grove near Lutz, north of Tampa. The son never became a real dirt-farming citrus grower. But 15 years later, he was editor of The Florida Grower.

Many of the people who came to Florida in those days were attracted by the magazine's glowing articles about agricultural opportunities in this land of sunshine, written mostly by associate editors Frank Whitman and Ralph Stoutamire.

In its early days, The Grower was the State's most effective promotional periodical, and almost the only source of information about Florida for people in other states.

From 1910 to 1925, the magazine was owned by the Florida Citrus Exchange, which used it to report its activities and to encourage cooperative marketing. When it decided to sell the magazine and the printing business that went with it, I persuaded the late Charles G. Mullen Sr. and Jerome A. Waterman to buy it.

They made me the editor. I knew nothing about agriculture. But a title is a wonderful thing . . . overnight a lot of people assumed I was an expert in all things pertaining to Florida agriculture.

In those days, The Florida Grower was published weekly. And some issues were as large as 108 pages.

But then the big Florida boom of the mid-20's collapsed. Next, the 1929 stock market crash deepened into depression.

Real estate advertising disappeared, and in its struggle for survival, the magazine became a monthly. Those were difficult days for everyone in Florida. In addition to being editor, I became advertising manager and circulation manager too.

Florida Grower changed with the times in the 10 years I was with it. Its articles about the wonders of Florida agriculture gave way to articles about the problems of producing and marketing Florida farm crops.

University of Florida specialists —like Prof. N. R. Mehrhof on poultry, Dr. G. F. Weber on vegetables, and Prof. E. F. DeBusk on citrus—became regular contributors.

Citrus growers encountered serious marketing problems. And I wrote much about their solution with the youthful conviction I knew all the answers.

In those days, Florida newspapers rarely published any farm news. Citrus growers got most of the information about their industry from The Grower.

Some of its articles in the late 20's and early 30's had a noticeable influence on the efforts of the industry to improve its marketing conditions. Typical of them were: "The Green Fruit Evil" by Dr. W. A. McKenzie; Karl Lehmann's "'ere, 'arry, 'ave an Horange!"; Judge Allen E. Walker's "Citrus Growers Plan Their Own Clearing House"; Julian Langner's "Helping Farmers Help Themselves"; Merton L. Corey's "Uncle Sam Offers Florida Helping Hand," and J. Curtis Robinson's "Making the Railroads Behave."

In the years immediately following the collapse of the boom in 1926, many efforts were made to promote new agricultural pursuits —to make farm lands worth something.

State Marketing Commissioner L. M. Rhodes had an article, "Florida Pays $100,623,070 Yearly for Foods Not as Yet Produced on Its Own Farms." (That figure, incidentally, is many times greater today!)

There was a short-lived promotion of banana culture, and articles on crops like Japanese persimmons, dasheens and chayotes.

But there were also articles about crops which found a place in Florida agriculture . . . such as tomatoes, avocados, limes, Irish potatoes, crotalaria, pine trees, bulbs, and tung nuts.

Florida Grower threw its support behind the cattle tick eradication program of the Florida State Livestock and Sanitary Board, the success of which has made possible the great cattle and dairy industries we have today.

By 1927, the canning of grapefruit sections attracted the attention of the Florida Grower which reported a state pack of 500,000 cases worth $3.6 million. In 1930, it reported the formation of six new citrus cannning plants—including the one at Lake Wales with a capital of $60,000.

Little did I think, when I wrote this original story, that I would ever have anything to do with the Lake Wales plant, and that during the operating season it would take $60,000 a day to pay its operating costs!

There was much interest in citrus research in the early 30's.

W. J. "Bill" Howey, who had done much to develop grove plantings, spent $15,000 on an idea for storing fresh citrus fruits so they could be sold at higher prices in the late summer months of 1931.

On April 8 that year, he stored 1,200 boxes of oranges, grapefruit and tangerines in three iron tanks, 42 feet long and 24 feet in circumference, under a partial 25-pound vacuum with inert gas inserted at Howey-in-the-Hills. Appropriately, famed humorist Opie Read gave the benediction when the tanks were sealed before a large gathering of industry people.

After a few weeks in the hot summer sun, Bill Howey lost his $15,000 and the fruit.

The first infestation of the Mediterranean fruit fly in Florida was reported by the Florida Grower in May 1929, and the eradication program under Dr. A. F. Camp was fully described.

At the time there was no available literature on the Medfly. So the Florida Grower published in booklet form all the information then available about the fly, its life cycle, host plants and eradication methods. The U. S. Department of Agriculture lists this booklet as the first known publication on the Medfly.

Following eradication of the first Florida infestation of the Medfly, the Florida Grower vigorously sought Federal government compensation for destroyed fruit and damaged groves. But this compensation was never granted by Congress.

Indeed, the Chairman of the

(Continued on Page 26)

Florida Farm Scenes of the Past 50 Years

Farming In The Space Age

By DR. K. STARR CHESTER

Vice President, The Chemurgic Council*

SOIL, WATER AND CLIMATE are the most basic requirements for farming; the key to controlling these is power.

And in the space age, the farmer will have a good grasp on that key.

By the year 2000, our oil, coal, and gas will be scarce and expensive. But limitless atomic power, converted into electricity, will be commonplace.

This power will make possible the reclamation of vast acreages that are now unsuitable for farming. Atomic hydroelectric installations should make it possible to drain and reclaim for agriculture such lands as the Everglades, the Dismal Swamp, and the Okefenokee Swamp.

Power in gigantic earth-moving machines, coupled with advanced knowledge on soil building, will enable the farmer of the future to cultivate rich, level lands . . . lands that recently were wooded wastelands or barren, eroding hills and gullies.

Irrigation, which has already increased fourfold since 1940, will be extended to millions of acres of dry and desert land through recovery—by atomic power—of fresh water from the sea.

More and more the weather will be brought under control.

Earth satellites will permit weather forcasting long in advance, with an accuracy that will permit low-risk, long-range planning of farm operations.

By such means as cloud seeding to produce rain, favorable weather will be created.

Frost danger will be averted by outdoor heating with infra-red lamps or electro-magnetic radiation, blanketing whole groves and orchards with lifesaving warmth.

Indoors, a perpetually favorable climate for high-level livestock production will result from widespread air conditioning of barns and poultry houses.

All of this will take much of the risk out of farming.

Electronics will appear on the farm in the form of automatic controls of many of the farm operations.

The farm manager will be able to feed into an electronic computer data on weather, soil, cultural practices, plant and animal growth, feed and fertilizer use, and market conditions. And the machine will perform the necessary calculations to enable the manager to adapt his operations in the most profitable ways.

Crop growth will be controlled and intensified by exposing plants to electric currents, electrostatic and electro-magnetic fields, and the specific wave lengths that are most stimulating.

Railroad humping cars are already being run electronically without any direct human control. Thus we can easily visualize the possibility of the farm manager of the future sitting at a console, viewing operations out on the farm on a television screen—and operating dials that regulate plowing, planting, cultivating and harvesting by electronically-controlled machines which may be made of glass and plastic that are stronger than steel.

Meanwhile, by short-wave radio, the manager would be in instant contact with the few key men that control his far-flung operation.

For generations we have been taught the virtues of diversified farming and legume rotation.

But with new knowledge and means for perpetually maintaining soil fertility, we will see crop rotations frequently give way to monoculture—growing the same crop on the same land, year after year, without impoverishing the soil.

This will permit the efficiency and economy of specialization in farming.

Space age farmers will tailor their crops to industry's needs

Much of industry now depends on the mineral raw materials: petroleum, coal, and metals. As these raw materials become scarcer and more expensive, industry will turn to the ever-renewable raw materials from the land.

In order to get the maximum production of use materials per acre, there will be a shift toward the high-yielding cellulose crops, trees and roughage.

Cellulose can be converted into food, directly, or indirectly in the form of roughage that can be fed to livestock successfully—thanks to the introduction of a mixture of synthetic urea, grain alcohol, and phosphoric acid which enables cattle to make excellent growth on corncobs, straw and other coarse roughages.

Far more food and feed per acre can be produced in this manner, and less expensively, than with such crops as alfalfa.

In the farm of the future, there will be no wasted crop residues. Those not needed for soil maintenance will find uses as raw material for food or industry.

Great uncertainty as to demand and price for crops and livestock yet to be marketed have plagued farmers past and present. In addition, they have been vulnerable to uncertain weather.

But there will be a much greater certainty of production in the future. The farmer will be no more vulnerable than any other ordinary businessman.

In part, this will result from greater control over weather, soil, water, and pests. Partly it may also be due to a greater self-regulation of production—just as self-regulation of production is practiced by many industries in order to avoid gluts and low prices.

To aid both the farmer and the user of his products, there will be a growing trend toward vertical integration and contract farming.

We are coming to the end of the period of *laissez faire* when farmers felt they had a right to do as they chose with their land—improve it or let it deteriorate.

Farm land is becoming too vital a national resource to permit its abuse. The time will come when farm land owners will be forbidden by law to permit their land to become unproductive.

If farmers will not be good stewards of the land voluntarily, they will be compelled to do so . . . or to relinquish the land to others who will take care of it.

Moreover, with the growing shortage of farm land per capita, there will arise a public demand that millions of farmable acres held by federal and state governments be restored to competent private ownership with the incentive to develop it agriculturally.

*(ACKNOWLEDGEMENT: We are grateful to Chemurgic Digest for allowing us to reprint this adopted excerpt from its July 1958 issue.)

Revolution On The Farmsteads

LOOK TO THE FARMSTEADS for the next great revolution in agriculture.

The past 50 years have seen hand and horse labor disappearing from the fields; trends today indicate the next big changes will bring complete mechanization and precision control of nearly all farmstead operations. . . .

Even the old-fashioned farm chore may be a victim of engineering progress!

So predicts Earl D. Anderson, 1958 president of the American Society of Agricultural Engineers. He says there are four major trends in the farmstead revolution:

Mechanization of farm chores and materials handling; providing proper environmental conditions for livestock; storing and processing for a marketing profit, and strong emphasis on quality control of farm products.

The electric motor, Allen maintains, will play as important a role in the farmstead revolution as did the internal combustion engine in changing crop production methods. Today, over 90% of America's farms are electrified.

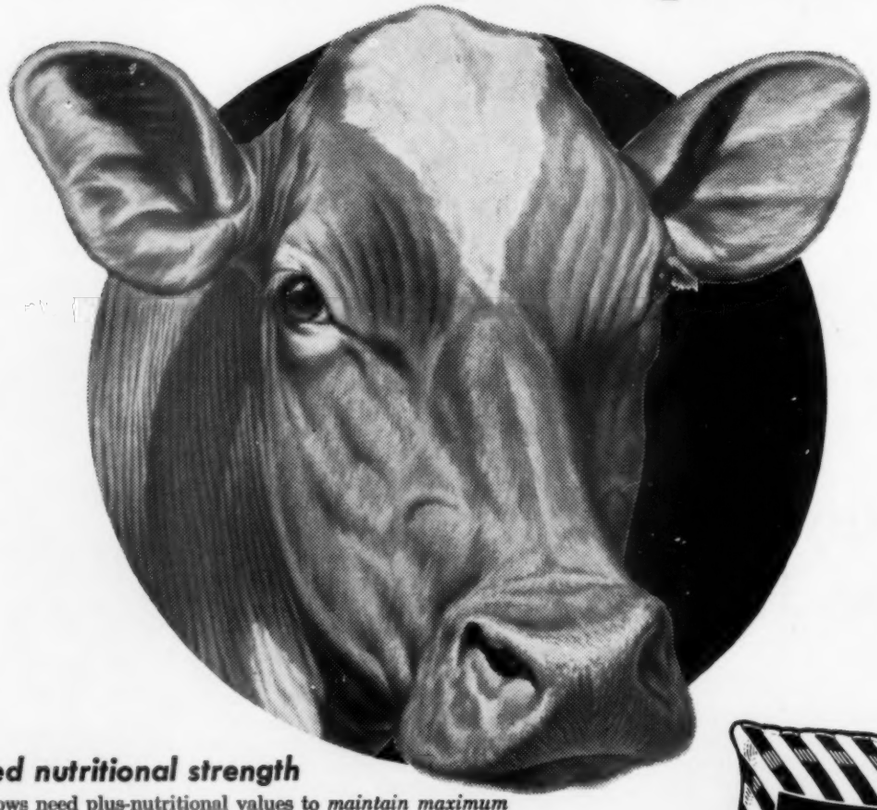
Probably the most important of the current trends is mechanization of farm chores. Allen declares: "The farmer who steps down from his tractor equipped with finger-tip control of the hydraulic mechanism is loathe to feed his cattle with a bushel basket.

"And no longer does he need to do his chores the hard way. Agricultural engineers have developed for his use mechanical silo unloaders and feed distributor systems, mechanical gutter cleaners, pipe lines and bulk tanks for handling milk and water, treating and distribution systems to make chores almost a push-button job."

However, he continued, more research is needed in developing coordinated systems of chore mechanization and materials handling—including both the equipment and structures and their efficient layout on the farmstead.

"The trend to provide proper environmental conditions for more effective livestock production is particularly evident among producers of swine and poultry. Farmers want buildings that will permit production planning independent of weather."

Boost milk production
with Ful-O-Pep Dairy Feeds



Added nutritional strength

Good cows need plus-nutritional values to *maintain maximum milk production* and sound health. That's why Ful-O-Pep Dairy Feeds are highly-fortified, highly-nutritious . . . to help you get maximum efficiency from the feed you buy.

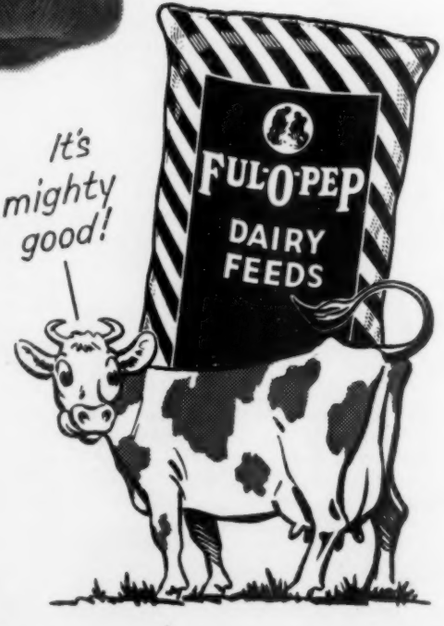
Feeds bacteria in cow's rumen

Ful-O-Pep Dairy Feeds feed the bacteria in the rumen, as well as the cow. These tiny organisms help your cow break down more of the grain and roughage into nutrients which the cow can assimilate and convert into milk . . . another big reason why Ful-O-Pep Feeds are efficient and economical.

Your cows get only the nutrients you pay for

You can't fool a cow! Feed her good feed and she'll give you good results. A quality ration gets full feeding value out of roughage—boosts milk production. That's why Ful-O-Pep builds quality feeds, because in the long run, quality feeds will make you more money. Get Ful-O-Pep for top results.

See your Ful-O-Pep Dealer



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Principles of

Heifer Management

By DR. JAMES M. WING
Assistant Dairy Husbandman
Agricultural Experiment Station

DIFFICULTIES in raising dairy-herd replacements usually are obvious only during the milk-feeding period.

It's easy to raise heifers after weaning. Thus there's a tendency to become lax in managing older replacement stock.

Yet, what happens between weaning and the first lactation may largely determine lifetime production.

Many factors are involved, and there is no definite program for all conditions. This article, therefore, deals with fundamentals which each dairyman can use in formulating his own policy.

"At what age can heifers be turned onto pasture?"

Generally, the practice is to keep calves off pasture until they are six months old. But modern research has shown no scientific basis for this long-standing recommendation:

Calves is New Zealand are reported to thrive when placed on pasture at two weeks of age. In England, it was shown that nine-week-old calves digested high-quality forage as well as it was utilized by mature cows; this was confirmed at the Georgia Experiment Station.

Research at the Florida and Tennessee Stations has shown that the entire digestive system of the calf is functional at three to four weeks of age. Applying this information, Florida, North Carolina and Georgia station workers developed much simpler calf concentrate feeds than previously were considered necessary.

This shows, of course, that calves can derive a large part of their nutritive requirements from solid feeds at an early age.

Green forage, in fact, may be especially valuable for young animals. Work at the Kansas Station has shown that grass juice contains factors which promote growth as much as antibiotics do in young calves.

In this connection, it's of interest that a machine for removing juice from forage has been developed at the Everglades Experiment Station. The purpose of this device is to reduce moisture content of forage so that large animals can consume extra dry matter. As a by-product, such machines could supply a ready source of juice for supplementing the feed of calves in the pre-pasture stage.

Calves at the Georgia Station grew exceptionally well when placed on pasture at one week of age. It should be emphasized, however, that this was young, highly fertilized pasture which was clipped often and kept leafy.

The quality and amount of pasture which is available must be considered in deciding whether to turn calves out.

Other major factors are the weather and shelter. Heifers at the Dairy Research Unit near Gainesville were able to survive without any shelter from two months of age.

But this system is not recommended. Calves raised in the open grew more slowly and appeared less healthy than those which had access to shelter.

Lack of housing in pasture areas appears to have resulted in disappointments, causing many herd managers to keep all heifers off pasture until they are at least six months old.

Yet, heifer shelters may be very inexpensive—three-sided buildings afford all the protection needed. If young heifers can get out of the rain and cold winds, they grow at least as well on pasture as in a closed barn.

New-born calves grow well in clean, open pens with protection from blowing rains. However calves at the Dairy Research Unit are kept in a closed barn during the first two months because carefully controlling environmental conditions makes the experimental data more reliable.

At two months of age, they are put on clean pasture areas where there is access to shelter. This eliminates much of the labor required for cleaning calf barns.

Fence-line feeders in the pasture take much of the work out of supplementary feeding by eliminating the necessity of opening and closing various gates. The shelters are located between two pasture plots to make rotation easy.

Hay and/or silage should be supplied in addition to pasture.

Some concentrate feeds are needed too, at least until heifers are six months old. This was demonstrated when Michigan workers showed that unidentified nutrients not found in forage are present in various grains.

Georgia workers have shown that liberal feeding helps prevent infestation by internal parasites. Florida experiments confirmed this, and have shown also that well-fed heifers are better able to take therapeutic doses of phenathiazine or other wormers.

Low-level wormers can be incorporated into the concentrate mixture. However parasitologists are not sure this is economical where large animals are involved.

Under some conditions, grain may be over-fed.

Tennessee dairy scientists found that very liberal concentrate feeding caused fatty connective tissue to form in the udders, causing much lower production than occurred in first-calf heifers which were not so liberally fed.

Still, this condition has occurred at the Florida Station on pasture alone. So it may be due to a nutritional imbalance, rather than to simple over-feeding.

Heifers raised from six months to calving at the Alabama Station on hay and pasture, without grain, were satisfactory. But they grew less than those which received grain.

At the Florida Station however, this system causes heifers to become too coarse and considerable sterility occurred. The pasture on which over-fattening of heifers occurred was pangolagrass and white clover.

While the pasture was kept mowed and fertilized, the fertilizer treatment was moderate (270 pounds of N and 135 pounds of P and K). Of course, the clover was well fertilized and no doubt it supplied some nitrogen for the grass.

There is no way to tell from present data whether a really high level of fertility would have been better for development of the heifers.

Later work based on the amount of forage which could be clipped from measured stands of grass at the Florida Station showed that considerable more fertilizer than the amount used in this experiment is profitable under some conditions. But no animals were available at the time to use in evaluating the quality of the forage.

However, high-protein concentrates seem to help. Therefore it seems possible that heavy fertilization also could keep pasture-fed growing without getting fat.

Fertilizer treatments are likely to be poisonous. For this reason, they must be applied several days before pastures are grazed.

By watching pasture conditions and the growing heifers, each dairyman can determine when and how much to supplement with high-protein concentrates. Of course, clean water and mineral matter must be available at all times.

Liberal feeding of heifers, when non-fattening rations are used, causes them to come into heat regularly at an early age.

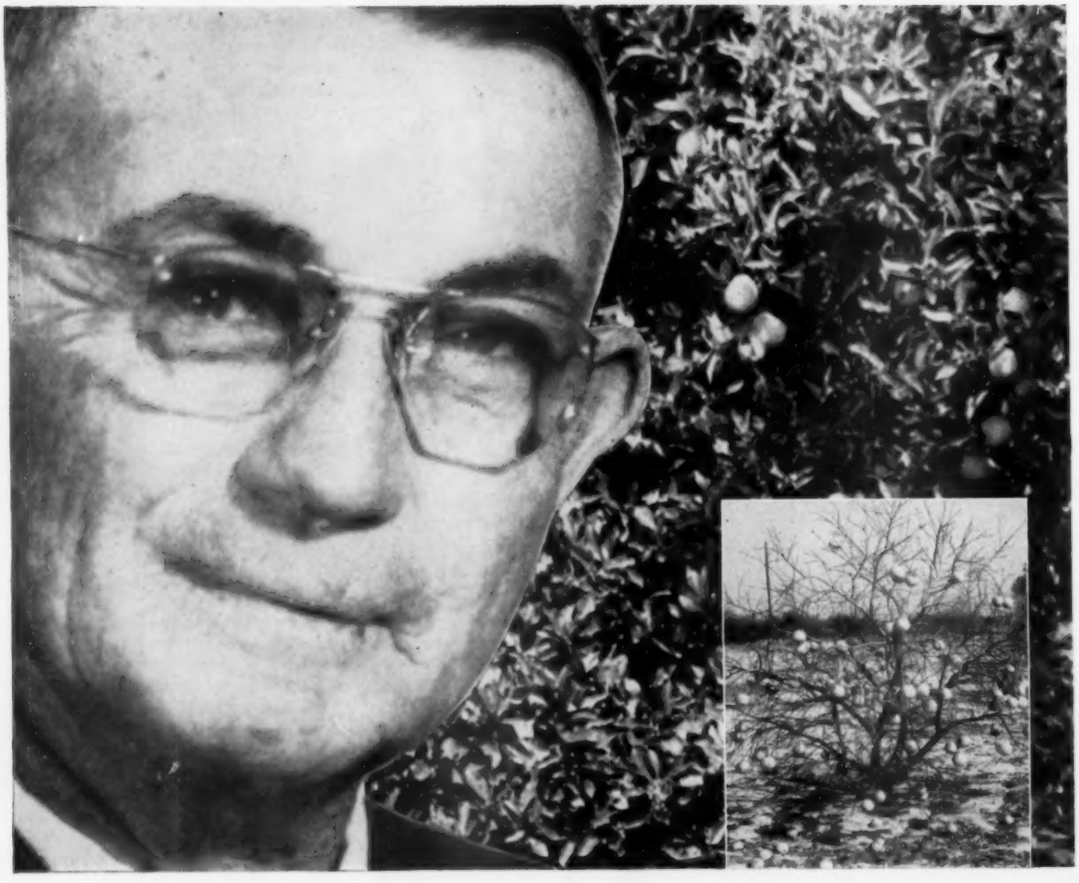
Few modern herd managers breed animals by age. The best method is to consider size and condition.

Dairy heifers which are in good flesh but not fat can be bred when the small breeds weigh 550 to 650 pounds and when the large breeds attain weights of 750 to 850 pounds. Usually this occurs about 15 months of age.

About two months before calving, young heifers should be confined to a clean pasture before the

(Continued on Page 36)

FROM TWO MONTHS OF AGE, these two-year-old heifers have been on pasture and liberal supplemental feeding. Production in all cases has been outstanding.



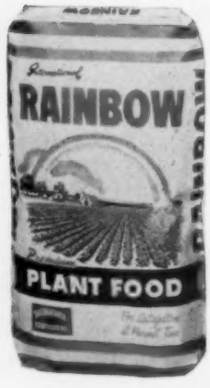
RAINBOW

cuts freeze damage

CITRUS TREES BOUNCE BACK FAST —That's what W. P. "Bill" Davis of Wauchula, Hardee county, has to say about Rainbow Plant food.

By fertilizing groves with Rainbow containing MEM, Bill Davis and hundreds of other Florida growers are cutting the risks and losses of freeze damage. When other trees are dropping leaves and fruit because of freeze damage, (see inset photo) Rainbow-fed groves are lush-looking and heading for better yields.

Get in touch with your nearest Rainbow representative . . . ask him about Rainbow and the extra profit protecting ingredient, MEM.



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Sweet Clover Hay

Sweet clover hay is not toxic unless it's moldy, according to Iowa State College extension veterinarian John B. Herrick.

Because it is relatively hard to cure, sweet clover hay may get moldy in the windrow. The moldy hay affects coagulation in cattle and they slowly bleed to death.

If the cattle are poisoned, the only treatment is blood transfusions. Most affected animals die if not treated.

Why Gamble

with your crops— and profits

Magnesium deficiency in citrus, and vegetable crops as well, can be most costly —both in quality and quantity of yield. For citrus, why not follow the recommendations of the Florida Citrus Experiment Station at Lake Alfred which stress the need for large applications of magnesium for citrus in soluble form and state that it is usually applied as a sulphate.

Play safe with BERKSHIRE'S EMJEO*

(80/82% Magnesium Sulphate)

For many years this dependable source of soluble magnesia has been a favorite primary plant food of Florida growers—along with nitrogen, phosphorus and potash. Used in combination with Muriate of Potash, it is usually more economical than other forms of potash and magnesium.

Act now...
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Be sure that your fertilizer manufacturer includes EMJEO in your mixtures as a dependable and economical source of soluble magnesium.

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Hydrocooling May Spur Fresh Fruit Sales

MORE THAN 25 years ago, an Italian immigrant—who had found the American way of life everything he had expected—decided to come to Florida.

Years before, as a youth of 16 at the turn of the century, he had become one of the teaming millions living in New York City. Since the Italian people have an inherent love for things produced in the soil, he naturally gravitated to the huge markets where fantastic quantities of all kinds of fruits and vegetables were bought and sold daily.

It wasn't long before he had his own office and was a full-fledged fruit and vegetable receiver. But he gradually narrowed down his operations until most of his business was with fresh oranges, grapefruit, tangerines and limes, and with watermelons.

Then, he felt the pull of Florida. And he believed his experience in the receiving end would be of great value if he became part of the still comparatively small Florida citrus industry in which he foresaw tremendous possibilities.

So the Italian immigrant again became a pioneer, just as he had years before in New York.

Andrew Spada was a comparatively young man of less than 50 years when he came to Florida. Looking things over, he decided the section around Lake Thonotosassa offered excellent prospects.

He worked out an arrangement with the old Peninsular Distributing Corporation, which had a packing house at Thonotosassa, to handle the company's sales. This gave him first-hand experience in selling Florida citrus from this end, as well as constant and close association with all the operations involved in preparing fruit for market.

A few seasons later, Spada opened his own packing house in Clearwater. He operated this plant from 1934 to 1940, quickly gaining enviable reputation as shipping some of the finest quality fruit available in Florida.

However, the Lake Thonotosassa section still had a strong appeal. So when the opportunity arose to lease the Peninsular Distributing Corporation house, for which he had previously handled the sales, he took advantage of it.

Five years ago, he built the present ultramodern plant of Spada Packing Company. His son has relieved him of many cares incident to such a complex operation, but the elder Spada (now in his mid-seventies) still keeps a keen, experienced eye on what is going on.

Today, this veteran is pioneering again—this time with a new method of cooling and packing oranges and grapefruit for the fresh market. If successful, it could mean the first radical change in packing house operations in 40 to 50 years.

AS COLD AS IT LOOKS, this cascade of water is an integral part of a new system of preparing fresh Florida citrus for market. The water shown above has reached the end of the hydrocooling unit and is disappearing into a trough underneath to head back to a refrigeration unit for recooling and reuse.

Growers are frankly concerned over the drop in the volume of citrus, percentage-wise, which is being sold through the fresh fruit market. They are worried about what might happen if the fresh market loses is competitive importance as a major outlet.

Therefore any system which makes it possible to put fresh cirtus in the hands of the consumer in better condition and at a lower price is of extreme importance to the grower—and is certain to give this market a much-needed shot in the arm.

Several advantages are claimed for the new system. Chief among these are less shrinkage, lower transit cost, more economical packing, less decay in fruit, and an increase in the packing house capacity.

The Spada company put the new system into operation last season. It was inaugurated just in time for the Valencia operations which had been drastically reduced by the freezes.

Nevertheless, it was used long enough to create genuine enthusiasm for its possibilities. Enough enthusiasm, in fact, that more money is being spent to double the capacity of one of the units involved.

The new system uses ice-cold water to chill the fruit, and employs equipment which automatically puts the chilled fruit into corrugated fiberboard containers or highly attractive polyethylene bags holding five or eight pounds.

Spada is the first company to install the whole system which includes the ice-water chilling unit (hydrocooler), the machines which automatically count the right number of oranges to go into a corrugated carton or bag, and equipment to seal these cartons with glue and get them ready for the truck or railroad car.

Members of the trade—the brokers, wholesalers and retailers involved in getting Florida's fresh citrus to the consumer—have long expressed an interest in getting citrus in somewhat smaller containers than the traditional 1⅗ bushels containers which has been Florida's principal shipping units.

The new system meets this situation nicely—it uses the half-box, or four-fifths bushel size container.

Enough figures have not been compiled as yet to make more than a preliminary comparison on operating costs. However the figures Spada does have indicate a substantial saving is possible when compared with the conventional method of packing fruit and getting it to market.

At present, such savings are a bonus to the packing house operator.

But neither the younger nor the elder Spada is expecting this situation to continue indefinitely. They will tell you frankly that any economies which the new system makes possible will eventually be passed along to handlers and consumers.

"Competition will do it," they point out.

While cooling citrus with ice water is new, this method of chilling has been used on some vegetables for several years. So far, California has not tried the ice water system of cooling its oranges except on a limited basis, and Pacific Coast shippers are watching Florida's efforts closely.

Should the new system work as well in Florida as some of the more enthusiastic persons think it will, it is likely California shippers will give it a try—even though they do not always have the same problems encountered by Florida packers in getting oranges to market.

Ice water is sprayed on the fruit as it moves along slowly through the hydrocooler; the frigid trip takes 25 minutes. When the fruit emerges at the end of the journey, the temperature inside has been lowered to less than 50 degrees.

Since the fruit is waxed before it is started through the cooling unit, the water runs off the fruit as it does off the proverbial duck's back

One large type hydrocooler has a cooling unit 56 feet long and seven and one-half feet wide. The fruit is about a foot thick as it travels on a slowly moving belt.

During the past summer, the Spadas added another deck to thejr cooling unit, thus enabling them to handle twice as much fruit in the same length of time. This gives the new unit a capacity of 1,700 to 1,800 half-box units per hour.

Some problems still must be solved. But shippers who are investing heavily in the new equipment are convinced that whatever "bugs" show up will be gradually corrected through research and experience.

Four shippers, including Spada's doubled operation, will be using the ice water system of chilling their fruit during the coming season. Spada plans to use it right from the start, and may run 1 million or more boxes through it from the new crop.

Everybody admits, even those strongly in favor of the new system, that the industry will know a lot more about the new method with one or two full seasons in the record books.

But the trend toward mechanization is clearly evident in Florida's fresh citrus fruit deal. It may eventually make this phase of the business just as mechanically automatic as the processing part has been for a long time.

You can see more tomatoes with

DITHANE M-22

When DITHANE M-22 (maneb) takes over disease control you can spot the field "a mile-away". The rows look lush and greener, the tomatoes free from disease blemishes, the vines loaded with more and bigger fruit. Experiment station tests show that yields are often as much as 15% higher with DITHANE M-22 than with other types of fungicides. Some growers claim it's all due to better control of late blight, gray leaf spot, early blight and Septoria leaf spot. Others point out that the improved condition of the foliage is another benefit. Find out for yourself . . . use DITHANE M-22.

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For better tomato insect control, use RHOTHANE *with* DITHANE. RHOTHANE *checks fruitworms, hornworms, pinworms, and psyllids.*

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Every Day Is Salad Day

By THOMAS J. HUGHES

FANCY MUSTARD GREENS on the Dickman Farms are inspected by farm foreman Henry Smith (left) who has been associated with the operation for a quarter-century, and general manager Lyle Dickman.

FLORIDA'S UNIQUE "salad bowl," synonymous with Ruskin, has become an area of many crops and almost year-round production.

Long before crops are planted in most areas of the state, Dickman Farms—pioneers of the salad deal on the west coast—will have packaged vegetables on the shelves of practically all the supermarkets within a 100-mile radius of Ruskin.

Unlike most of the older agricultural producing centers of Florida, the Ruskin production of leafy vegetables for salads has remained in the same location since its origin some 13 to 15 years ago.

Lyle Dickman attributes the farms' success in obtaining and maintaining their market to several factors:

In the first place, the product on the store shelf is ever fresh. Also, the farms are able to produce a constant supply and are near the retail markets they serve.

The history of this Ruskin operation has been repeated many times:

Paul Dickman began farming in the area during the late 1920's. The story is told that he saved nickels from the sales or hamburgers at a small sandwich stand in order to plant his first acre of tomatoes.

From that small beginning, he expanded to over 1,000 acres of tomatoes in some seasons.

However, in recent years labor has become more of a problem. So the Dickmans ventured into cattle and the lemon phase of farming, and de-emphasized vegetables somewhat.

Before 1945, the operation consisted of tomatoes, cucumbers and other crops typical of the Ruskin area. But following World War II, when integration was unheard of in most places, this farm switched from their usual crops to a completely mechanized, integrated leafy vegetable operation.

Two years ago, the entire farm operation was turned over to young Lyle Dickman. And he has been doing an outstanding job managing the multi-phase operation.

Plans for this year call for 600 or more acres of leafy vegetables throughout the season. These include such crops as Chinese cabbage, green cabbage, escarole, endive, carrots and radishes for use in mixed salad packs.

In addition, the Dickmans are also producers of spinach, mustard, collards and kale. These are packaged as fresh vegetables.

Sweet corn was a major crop on the farm at one time . . . until the muck area around Lake Okeechobee practically captured the market for this vegetable. Just the same, the Dickmans anticipate growing 200 acres of corn this year.

Vegetables going into slaws and salads are cut in the forenoon with a combine-like harvester. They are immediately hauled to the packaging plant where, with a minimum time lapse, they are washed, precooled and packed.

These packages are kept under refrigeration until the following morning. Then they are delivered to supermarkets in refrigerated trucks.

Every second day delivery is made to the various market places. At the time of these deliveries, old packages of the Ruskin brand vegetables are picked up and returned to the farm for disposal.

Lettuce can be grown only in cool weather, therefore it comes into production from December through March. This fancy vegetable is packaged in fiber containers and vacuum cooled.

All the other vegetables, with the exception of corn and cauliflower, are packed in cellophane type bags. Corn is packaged in a shallow container with a transparent top.

Even though it has not been possible to produce vegetables economically the year 'round in Ruskin, the Dickmans do supply certain mixed packs all through the year. This is possible because their packaging plant operates the entire year.

Moreover, they guarantee to deliver a continuous supply for a fixed price. This contracted price and steady supply are good selling factors in the market place where the housewife can obtain a package of slaw or salad any week or month she chooses—and without an increase in cost.

Sales for the 12-month period ending June 30th, reveals Lyle Dickman totaled over a million packages in the area chain stores.

In addition to these sales, a substantial quantity of packaged vegetables was sold to institutions such as school lunch rooms, hotels and restaurants. This institutional trade gets its vegetables in larger containers.

Greatest change in his quarter-century with the Ruskin operation, reports farm manager T. H. (Henry) Smith, was the coming of the high wheel spray machines.

When he first came to the farm, the only spray equipment was a one-row mule-drawn rig and the napsack sprayer. Both were slow and hard to work with.

Now it is possible to spray eight to 10 rows at one time—and do a better job—with the modern high wheel tractors, Smith adds.

The coming of new and better spray materials are also a big change from the old hard-to-mix solutions, the farm foreman continues. They produce better results also.

In the early days, the only tractor on the farm was an old Fordson which was used to disk the land when preparing the seed for planting. All the cultivation was done with the so-called "Georgia stock" plow.

One of the worst setbacks, Smith relates, occurred in the fall of 1936 when a hurricane completely destroyed the tomato crop a day or two before they were to be staked.

Young Dickman's job as general farm manager over the large unit keeps him constantly on the move:

In addition to the vegetable operation discussed here, there are approximately 2,000 acres of improved pasture stocked with cattle, 350 acres of lemon groves, and various other jobs to attend to daily.

As if all this did not take up enough of his time and energy, he serves as chairman of the board of Soil Conservation District Supervisors in his county and recently was appointed by Governor LeRoy Collins to serve on the State Conservation Board.

Lyle Dickman was the recipient of the Governor's Award as outstanding soil conservationist in Florida in 1957.

SELF-POWERED AND SELF-GUIDING mechanical vegetable transplanters will set six to *10* acres per day. This crew is setting four rows of cabbage as the machines move slowly through the field.

Six—count 'em!—*six passengers*
can ride in this International Pickup.

Carries the whole crew in "sedan" comfort
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NEW INTERNATIONAL TRAVELETTE!

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Each Farm Must Have *Adequate* Fire Protection

"FIRE!"

This cry strikes terror to the hearts of all. But perhaps it is most terrifying to the farmer, far beyond the water mains and immediate fire-department help.

Any fire is a serious matter, one that demands the best and fastest of thinking and action. Preparation for this emergency can mean the difference between minor damage or complete loss—or even injury or death.

Having ample water available is the best preparation for fighting fire. Chances for disaster are strongest where there is inadequate water for fighting a fire.

National Fire Prevention Week, being observed October 5-11, is a good time to appraise the fire-fighting capacity of your water system.

On the farm, the modern electric water system is the basis of good fire protection.

Factors that determine the capacity of a water system are: the amount of water in the well itself and its ability to replace water rapidly, the power of the motor and the capacity of the pump, and the size of the pressure tank that is a part of every complete water system.

Needed extra protection is a pressure or gravity storage tank of 1,500 or more gallons capacity. The water system and storage tank, together with properly sized piping and adequate hose outlets, serve as the strongest insurance against loss of life and property by fire.

Water systems should provide, according to a National Association of Domestic and Fire Pump Manufacturers recommendations, a minimum of 500 gallons an hour for fire-fighting.

A vital point to remember—or to correct, if necessary—is that the wiring of the water system must be protected from the possibility of burning out during a fire.

The pump should be placed on an entirely separate circuit from other equipment. It's a good idea to run the pump wiring underground, rather than alongside a building where it could be burned.

If the pump is located in a building, it should be fed by an individual circuit with a separate switch clearly marked as the pump switch only.

Wiring for the pump is your lifeline as far as fire-fighting is concerned. If it gets knocked out, you might just as well stand by and watch the fire take its course.

EVER-PRESENT is the threat of a farm fire. But when you have running water under pressure, you know you have a means of fighting fire. The cost of installing an electric water system—if it were put in only for fire protection—seems small when compared to loss of lives or a farm building.

Ordinarily, hydrants for fire-fighting will be used for other purposes around the farm. But they should be located so as to reach any part of the building—inside or out—with the hose, adding about 15 feet for the spray.

Adequate hoses should be immediately available for emergency use. They should be kept in 50- and 100-foot lengths on reels which are located in one central place.

Hoses that deliver seven or eight gallons of water a minute can help put out an ordinary fire that's spotted in time. But it's well to remember that a ¾-inch hose will deliver about 50% more water than a ⅝-inch hose; a one-inch hose, about two and one-half times as much.

Fire destroys 3,500 lives and an estimated $110 million worth of property each year in the rural areas of the United States. The eight *preventable* causes accounting for most farm fire losses are:

Carelessness with matches, improper use of gasoline and kerosene, spontaneous ignition, unsafe store and furnace installations, inadequate lightning protection, misuse of electricity and appliances, sparks on combustible roofs, and defective chimneys.

The most common cause of fire is the burning of wood or paper or some other combustible material.

Farmers should be prepared for all the types of fire they might be forced to fight. Since all fires must have fuel, heat and air to burn, controlling these three factors controls the fire.

Water cools and shuts off the oxygen supply from an *ordinary* fire. For this reason, it is highly effective as a fire-fighting agent.

But water should *not* be used for fires starting in grease, oil or electricity. Water spreads an oil fire because oil floats and continues to burn. And since it is an excellent conductor of electricity, water spreads electrical fires also.

For these special types of fires, a chemical smothering agent—such as carbon dioxide, vaporizing liquid, foam, or even bicarbonate of soda—should be used.

Any fire extinguisher maintained for this purpose should be approved by the Underwriters' Laboratory. Moreover, it should be checked once each year to see if the chemical needs replacement.

Even with the best of equipment on hand, it will be useless if the potential fire-fighters don't know what to do with it. Occasional fire drills, for the whole family and all hired hands, will help avert such a situation.

Remember, what *YOU* do is important. Practice fire prevention constantly.

Don't give fire a place to start: Repair or replace defective heating equipment and chimneys; be careful with matches and lighted cigarettes; don't overload electrical circuits, and check and eliminate all fire hazards regularly.

Be vigilant in fire prevention at all times. And strengthen the organized rural fire protection services in your community.

Here are some pointers on what to do when fire strikes:

Stay calm; don't panic. Previous fire drills should have made it clear to everyone what to do now.

Quickly get everyone out and away from the burning building. Call neighbors and/or the rural fire department for help at once.

Begin fighting the fire with the equipment you have. If it's an oil or electric fire, smother it with chemicals or dirt or sand—*don't* use water on it.

Keep the fire from spreading; concentrate on protecting other buildings (by wetting them down thoroughly), livestock and property.

As help arrives, direct it to where it will do the most good. Knowing your property, you'll know where the greatest danger is—and each minute counts.

Water systems are individually designed, to fit individual needs. (That's why they aren't over-the-counter purchases like television sets and washing machines.)

Consequently, if you're replacing an inadequate system or installing a water system for the first time, it is important to select a system that will give ample water for both immediate and future needs.

Remember, along with the necessity of having adequate water for fire protection, there are certain every-day water requirements. At least 50 gallons of water a day for each person is recommended as the minimum supply.

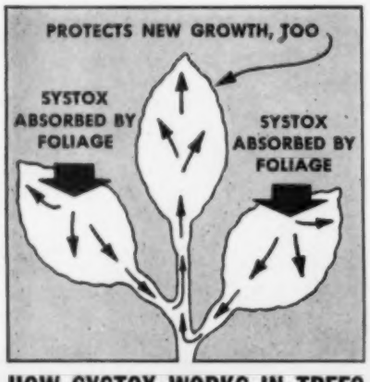
Each bathtub or shower, for example, requires from 25 to 30 gallons of water. Flushing the water closet takes six gallons; filling a lavatory, one and one-haf gallons. Modern lawn sprinklers use about 120 gallons of water an hour.

An experienced water systems dealer will know how to establish your current and future needs—and how to supply you with fire protection. He will also assume responsibility for the complete installation, and provide repair and replacement service.

NOTHING STOPS APHIDS AND MITES ON CITRUS LIKE SYSTOX®

Systemic action protects entire tree . . . lasts longer per spraying . . . costs less per season

Increase your citrus income and profits this year with SYSTOX, the most effective and economical insecticide for the control of aphids and mites on citrus. When you spray with SYSTOX, you get virtually a complete clean-up of aphids and mites immediately. And you prevent further aphid and mite damage for a long period, because SYSTOX goes right on protecting against attack since it works from *inside* the tree, in the sap stream.



HOW SYSTOX WORKS IN TREES

SYSTOX spray on foliage is absorbed into sap stream where it translocates, protecting the entire tree, even new growth formed after spraying. SYSTOX even kills insects on underside of leaves, where they are often missed by ordinary chemicals.

SYSTOX is absorbed by the foliage and the entire tree, including new growth developing after application, is rendered toxic to aphids and mites. SYSTOX can't be washed off by rain . . . it's harmless to beneficial insects after application . . . lasts longer . . . requires fewer sprays . . . *costs less per season!* Get SYSTOX now at your Farm Supply Dealer's and insure top citrus profits this year.

No other insecticide offers these important advantages

SYSTOX is harmless to beneficial insects after application.

SYSTOX lasts longer, requires fewer applications.

SYSTOX is absorbed into the foliage of the tree, can't be washed off by rain.

SYSTOX works in the sap stream – protects entire tree – guards new growth as it forms.

SYSTOX A PRODUCT OF **CHEMAGRO**

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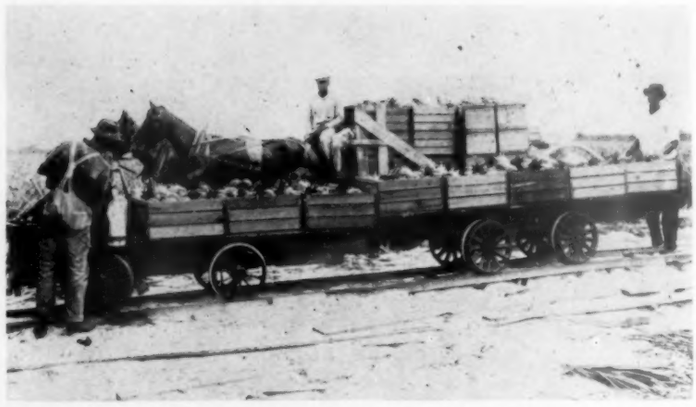


PINEAPPLES WERE GROWN SUCCESSFULLY around Fort Pierce and around Punta Gorda in the first quarter of this century. And—for a while—it looked as if there was a big future for this crop in Florida. However diseases eventually wiped out the industry and proved it impractical.

America's Foremost Deep Well Pumps

1

FOREMOST SERVICE

Some folks consider pump service as important as pump quality. If you do, nearby Peerless service from reputable, eager-to-serve factory trained pump distributors may be the deciding reason for choosing a Peerless deep well pump. Then you're assured of pump dependability at all times.

2

FOREMOST ECONOMY

If economy is your pump "buy" word, look no further than Peerless. A Peerless pump is designed and built with economy in both first cost and operational cost in mind.

3

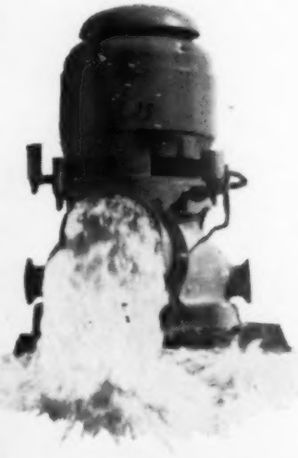
FOREMOST ENGINEERING

Peerless never delivers a turbine pump off the stock pile. Each one is engineered at the time of purchase, to your own individual well, crop, soil and water requirements. Insist on this top flight quality, under ground.

4

FOREMOST PERFORMANCE

The word gets around. One satisfied Peerless owner tells another. Peerless operating records for dependability are outstanding in their field. Putting it another way—a good well deserves the best pump. Peerless is first in deep well pump sales because it's the *best* in performance over the years.



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Citrus Insect Control for October 1958

By
R. B. JOHNSON, R. M. PRATT, and W. L. THOMPSON*
Florida Citrus Experiment Station, Lake Alfred

RED SCALE is now increasing rapidly and infestations are expected to be severe in many groves in October and November. Purple scale infestations are also expected to be above average in October.

Rust mite will increase sharply and will be at a high level by the end of the month. Purple mite infestations will also be above average and Texas citrus mite infestations are increasing.

Spray program: The insect and mite problem looks like it may be more inclusive this October than usual. There are many groves in need of a scalicide; rust mite, purple mite, and Texas citrus mite are all increasing; grasshoppers are showing in injurious numbers; and there are enough citrons around to make it a good season for plant bugs.

Scale insect control: Purple scale is now fairly easy to find in many groves. In many more, it is not so noticeable and may do a lot of damage unless discovered and controlled. The first place to look for purple scale is on the leaves because there it is easiest to find, but the twigs and fruit should also be checked. There are two reasons why it is important to examine the fruit, especially around the button. First, a small amount of scale around the button may cause the fruit to drop later; and second, wherever there is a live purple or chaff scale on the fruit, there will be a green spot. Such green spots are not removed in the coloring room and are a pronounced grade-lowering factor.

Florida red scale is not so easy to locate as purple scale because it is usually less evenly distributed. Red Scale tends to build-up to large numbers in localized areas of a grove or even on parts of trees. This means that more trees should be checked for red scale than for purple scale.

If purple, Florida red, or chaff scales are easy to find, control measures should be taken to prevent one or more of the following: leaf drop, fruit drop, grade-lowering green spots, and dead wood. Good control should be obtained throughout October because a high percentage of the scales will be in the younger stages. Parathion 15W at 1.0 to 1.7 pounds per 100 gallons is preferable to oil. Malathion 25W at 3.0 to 5.0 pounds may also be used. No oil spray of any kind should be used at this time of the year or throughout the winter because all known oils reduce the soluble solids content of fruit and make trees more susceptible to cold injury.

Soft brown scale will probably be numerous in a few groves. Parathion is ineffective, but good results may be obtained with malathion.

*Written September 23, 1958. Reports of surveys by Harold Holtsberg, Fort Pierce; J. W. Davis, Tavares; K. G. Townsend, Tampa; T. B. Hallam, Avon Park; and L. M. Sutton, Lake Alfred.

SCALE AND MITE ACTIVITY BY DISTRICTS*

District	*Purple Scale*	*Red Scale*	*Purple Mite*	*Rust Mite on leaves*	*Rust Mite on fruit*
West Coast	3.56	3.84	.41	1.18	1.81
Indian River	4.05	3.41	1.36	.55	1.70
Upper East Coast	5.01	.26	1.75	1.15	1.17
Gainesville	4.17	.50	.67	.17	0
Orlando	3.17	2.50	.45	.69	.72
Brooksville	4.34	.19	.88	1.75	2.13
Ridge	4.72	4.35	.74	1.84	2.31
Bartow	3.27	.60	0	.80	1.00
State Average	3.99	3.51	.73	1.13	1.50
Last Year	3.42	2.85	.89	1.06	1.26

*Third week in September. Activity is computed from populations, amount of hatching of scales, and number of groves with increasing or decreasing infestations. Activity is considered high if above 4.0 for purple scale, 3.0 for red scale, and 1.5 for mites.

Red spider control: During September and October, the Florida citrus grower hopes that he will control purple mite and Texas citrus mite with a single spray. In past years this has been a vain hope with some exceptions, and those who did not properly time their sprays often found that even two applications was not quite enough. Although it now appears that the newer, more effective miticides have improved the chances of all-winter mite control with one spray, much of this gain may be lost by applying too little too late. It is true that the later in the Fall one can wait before applying a miticide, the better the chance of not having to respray before post-bloom. But, this is true only if the mite population is not allowed to reach a high level before spraying. In general, the lower the mite population at the time of application, the longer the period of control is likely to be. For these reasons we strongly recommend that spraying for mites, either purple mite or Texas citrus mite, be delayed as long as possible, but that sprays not be delayed after 20 percent of the foliage is infested.

Whenever a new miticide or insecticide appears on the market, the price is usually rather high. When this happens the user is tempted to reduce his costs either by using less than the recommended amount per 100 gallons or by applying fewer gallons of spray per tree. These practices are rarely good economy. In the case of miticides that give a quick kill, reducing the dosage in either manner may result in an equally satisfactory clean-up, but the number of weeks of control will be reduced and mites will often multiply much more rapidly when they reoccur. Sometimes only a short period of control is needed and a reduced dosage may be justified under such circumstances. It is not justified at this time of the year when a long period of control is needed.

The list of materials recommended for red spiders on citrus now includes the newer miticides Tedion, Trithion, and Kelthane; the older miticide Systox; and the oldest of all; DN Dry Mix No. 1. The most effective of these is Tedion. This miticide is recommended for use only on non-bearing trees or trees without fruit because no residue tolerance has been established for any food-crop. However, a small quantity will be available for grower trial under an "experimental sales permit." Only this specially-packaged small quantity may be used on fruit.

Tedion is a slow acting miticide with exceptionally long-lasting properties. It is ideal as a preventative treatment, but injurious numbers of mites may remain for as long as 3 or 4 weeks if it is applied to high populations. Where mites are very numerous, Tedion should be supplemented with a quick-killing agent such as parathion, TEPP, or Chlorobenzilate. The mixture of ½ pound of Tedion plus ½ pound of Chlorobenzilate per 100 gallons is very good because it combines rust mite control with quick and long-lasting control of spider mites.

Trithion is the second most effective miticide. It may be used at any time up to 14 days before harvest. The recommended dosage of Trithion is 1.0 pound of the wettable powder or ½ pint of the liquid per 100 gallons. Trithion combines quick clean-up with good residual properties against red spider and is also fairly effective against rust mite. Where rust mite is apparently absent or at only moderate levels, Trithion may be used without zineb, but zineb should be included if rust mite is severe.

Kelthane is as effective as DN Dry Mix No. 1 at its very best and is more reliable than DN during rainy weather. The recommended dosage of Kelthane is 1.0 or 1.5 pints of the liquid or 1.0 to 1.5 pounds of the powder per 100 gallons. The higher dosage is preferred where mites are very numerous at the time of application. Kelthane is of some value against rust mite, but is not sufficiently effective to be used without a supplement for control of rust mite.

DN Dry Mix No. 1 at ⅔ pound per 100 gallons is most effective when applied to low populations and before eggs become numerous. It should not be used when the temperature is above 88 degrees and should not be mixed with lime-sulfur or other alkaline materials. The mixture of DN and parathion sometimes causes a leaf drop, and some injury may develop where a drop of spray dries on the lower half of the fruit, especially on Hamlin and pineapple oranges. A DN-

(Continued on Page 44)

CONGRATULATIONS

Florida Citrus Mutual,
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citrus organization,
extends sincere
good wishes to
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and
Rancher
on its 50th Anniversary
of service to
Florida agriculture!

Like FG&R, Florida Citrus Mutual offers its more than 9,000 citrus growing members an imposing list of services — services which have made them the best informed agricultural producers in the world — and among the most successful financially!

If you are producing citrus commercially, why not join in this great program of self-help based on men and ideas in action? Write for full details!

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Transition Years

(Continued from Page 13)

House Appropriations Committee, the Honorable Will R. Wood of Indiana, became so concerned about the GROWER's campaign that he sent a Secret Service agent, George E. Broadnex, to Florida to investigate the editor. The agent's report was duly recorded in Congressional reports.

Another interesting experience in those days was a $100,000 libel suit filed against the magazine and its editor by a candidate for Commissioner of Agriculture, who was running against Nathan Mayo.

Libel was charged because a political article by the editor stated that friends of the candidate denied he had received $25,000 in campaign contributions from "green fruit shippers."

Mr. Mayo won the election and the unsuccessful candidate died before his libel suit was settled.

The early 30's were the days of the famous Fruitman's Club, an informal group of citrus shippers which held dinner meetings at Orlando and, unhampered by the Federal Trade Commission Act we have today, agreed to limit shipments of fresh oranges and grapefruit to raise prices—usually without success.

Its failures led to the formation of the Florida Citrus Growers Clearing House Association, of which James A. Griffin, the Tampa banker, was president, and Archie M. Pratt was general manager.

Grower - controlled in theory, shipper - controlled in fact, it had difficulty in reconciling conflicting interests and failed when it found that its 80% control of fruit was insufficient to effectively regulate shipments under surplus crop conditions.

The citrus industry's next effort to do something to help itself was in 1933, when the Florida Citrus Advertising Association was formed.

Such well-known leaders as W. C. Daniells, C. W. Lyons, J. A. Snively, J. J. Parrish, R. D. Keene and L. Maxcy were directors. They had much help from Earl W. Brown, of DeLand, who made most of the speeches.

The Association asked its members for 3 cents per box for advertising Florida citrus fruit. It also asked for 3-cent per box contributions from the railroads and boat lines, but didn't get them.

While its funds were limited, the Association achieved remarkably good results in the following year. Its experience inspired industry support for the creation by the State Legislature in 1935 of the Florida Citrus Commission, and the levying of State excise taxes on all fruit to finance advertising.

By far the most widely-quoted article published by the FLORIDA GROWER in my time was entitled "The Stygian Canal." This denounced the cross-state sea-level ship canal, which President Roosevelt was beginning to build with relief funds, as a threat to Florida's underground water supplies.

It appeared in June 1935. And in the next few months, the editor spent most of his time making speeches on the subject before civic clubs and farm groups throughout Florida.

The canal was not built, when Congress refused to appropriate money for it. But in the fight the editor developed ulcers.

When he recovered, some months later, the State Legislature had created the Florida Citrus Commission, and he accepted an offer to go to work for it, with the mistaken notion it would be a less turbulent occupation.

His leaving in 1935 marked the end of the transition of THE FLORIDA GROWER from its original promotional concept to its present firmly-established position as a publication serving the informational needs and best interests of all producers of Florida farm crops and livestock.

* * *

The largest room in the world is the room for improvement.

* * *

Painting doors? Keep metal hinges, locks and knobs clean by coating them with petroleum jelly. Paint comes off with jelly after the door has dried.

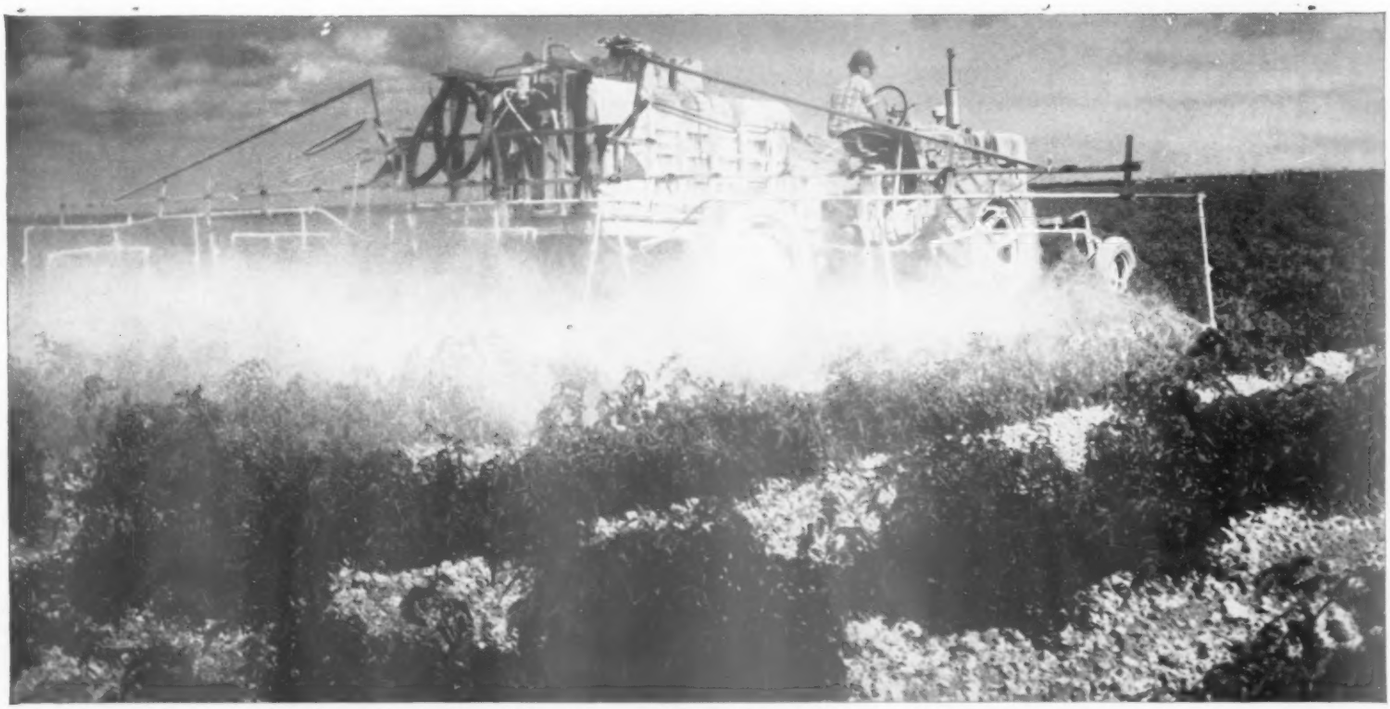
PRODUCE HIGHER QUALITY BEEF WITH BETTER BRAHMAN BULLS TO MAKE A PROFIT

Here is one of our bulls that is typical of our type of Brahman cattle. Please observe the **WIDTH, DEPTH, THICKNESS, BACK, HIND QUARTERS** and **GENERAL BEEFINESS** of this Bull.

Our grade Brahman calves and steers constantly top the market at a greater weight wherever sold.

If you wish to increase size, quality, and price of your beef animals, buy a **better Brahman bull.**

A. DUDA & SONS
COCOA, FLA.



• Spraying with Du Pont "Manzate" maneb fungicide controls early and late blights, and gray leaf spot . . . helps boost your yields of better quality tomatoes through a longer growing season.

Protect vegetable crops...harvest more No.1's with Du Pont's wide selection of organic fungicides

Du Pont offers Florida vegetable growers the widest selection of fungicides available for the most effective control of major fungus diseases. Du Pont "Manzate" maneb, "Parzate" in nabam and zineb formulations and "Zerlate" ziram—all are fungicides with outstanding records of performance in disease control. All are fully registered for use in Florida.

And now Du Pont announces a new disease control chemical for use in Florida—"Thylate" thiram fungicide. "Thylate" is recommended for the control of early blight and rhizoctonia in celery-plant beds and gray mold on tomatoes.

MANZATE®

Maneb Fungicide

Unequaled in late blight control in Florida tests

Late blight was reported as the most serious disease encountered during spring '57 tests of fungicides by the Everglades Experiment Station. In fact, one of the worst outbreaks in the history of tomato production occurred in many areas of South Florida in the spring of 1957. And maneb was found to be more effective in the control of late blight than any other material tested.

Use "Manzate" on tomatoes, beans, celery, cucumbers, onions, potatoes and watermelons to cut disease losses straight through the season.

PARZATE®

Nabam and Zineb Fungicides

Mild on plants—tough on diseases!

"Parzate" nabam and zineb fungicides offer low-cost disease control on many crops such as watermelons, cucumbers, potatoes, lettuce, tomatoes, sweet corn, celery and peppers. "Parzate" resists washing-off because the small particles stick to leaves and fruit.

ZERLATE®

Ziram Fungicide

High in fungicidal efficiency and adhesive properties

Use Du Pont "Zerlate" Ziram Fungicide—as a spray or dust for effective control of many plant diseases. "Zerlate" has good adhesive properties . . . controls early blight on potatoes, early and late blights on celery. Use "Zerlate" to control downy mildew and other leaf diseases on cucurbits.

NEW! THYLATE®

Thiram Fungicide

Latest vegetable disease control development

The latest addition to Du Pont's line of fungicides—"Thylate" has been thoroughly tested and has given outstanding control of early blight and rhizoctonia in celery-plant beds and of gray mold (botrytis) of tomatoes.

On all chemicals, follow label instructions and warnings carefully.

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BETTER THINGS FOR BETTER LIVING . . . *THROUGH CHEMISTRY*

E. I. du Pont de Nemours & Co. (Inc.), Grasselli Chemicals Department, Wilmington 98, Delaware

Machinery MAINTENANCE

By S. E. DOWLING
Assistant Agricultural Engineer
Florida Agricultural Extension Service

THE VAPORIZING ability of a fuel at a given temperature is the property called volatility. The fuels that we deal with contain a range of components that differ in vaporing ability.

Actually, this is a progressive range that usually runs from fairly light to relatively heavy components.

Whether the fuel is gasoline or distillate, a range of this kind is encountered. Gasoline, in part or as a whole, will be easier to vaporize than distillate.

Volatile type tractors combine some of the properties of both types.

Good vaporizing ability is especially needed for starting and warmup when the engine is cold, and for operation at temperatures below that considered best for normal operation. Opposed to this requirement is full power and economy in an engine which has already attained its correct operating temperature.

Yet, the fuel must not be so heavy as to sacrifice combustion efficiency.

Consequently, in good fuel, the opposed requirements are in proper balance. The way this works out in practice is rather interesting.

Due to their higher manifold temperatures and lower compression pressure, tractor engines designed to burn fuels heavier than gasoline have a lower operating efficiency. But this is intended to be more than offset by the greater energy content per gallon of the heavier fuel.

On the other hand, tractor engines designed to burn gasoline have a higher compression ratio. They have a higher operating efficiency due to their use of a colder manifold, and less manifold restriction permitting greater volametric efficiency.

This gain, however, is offset by the lower energy content per gallon of the lighter fuel compared to the heavier fuel.

If a two-fuel tractor is to be operated continuously on gasoline, better economy could be obtained by increasing the compression ratio and converting the engine to that kind of operation. When this is done, several other mechanical changes have to be made with respect to spark plugs, valves, valve lubrication, manifold, etc.

Another aspect of fuel volatility is the tendency to dillution of the crankcase oil with unburned portions of the fuel. This tendency is less for gasoline than for heavier types of fuel.

With gasoline, there is less interference with cylinder lubrication from washing down the cylinder walls by unburned fuel during periods of poor combustion.

If, however, the volatility of the fuel is substantially correct for the type of engine concerned, and if proper control of manifold heat and engine cooling temperatures is made, there should be no serious trouble from excessive dillutions.

Excessive dillutions resulting under these circumstances might be the result of using fuels which are too heavy in the final portion of their composition.

"FIRESTONES GRIP WELL... AND WEAR LIKE IRON!"

says Hollis J. Wall, foreman,
the R. T. Thomason & Son "Cherokee Farm,"
Chesnee, South Carolina.

Mr. Wall (left) and employee Alexander Wyatt watch Spartanburg Firestone Dealer C. E. Harrison check the self-cleaning traction bars on a set of Firestone tractor tires.

Hollis Wall insists on Firestone tires for the 400 acres of Piedmont peach orchards he manages in Spartanburg County—and here's why: "We use tires hard for plowing, dusting, and hauling. Firestones stand up to it longer than any other tires I've seen. They grip well in all soils, wear like iron, and run clean. We're always trying to keep costs down, and Firestones are a sure way to do it."

Performance like this has made Firestones a top choice in the Piedmont and on farms everywhere. But now Firestone adds new stamina and toughness to every Firestone tire with a new formula for long wearing ability—Firestone Rubber-X! Exhaustive tests of aging and abrasion resistance proved Firestone Rubber-X helps make tires extra strong, extra efficient!

See your Firestone Dealer or Store and find out how Firestone Rubber-X and exclusive Firestone S/F (Shock-Fortified) cord help build farm tires with superior lasting qualities. See the new All Traction Champion*. And ask about Firestone's Free Loaner Service that lends you new Firestone tractor tires to use while your old tires are retreaded or repaired.

TOP PERFORMERS
ON AMERICA'S FARMS
for trucks
for passenger cars
NOW WITH
FIRESTONE RUBBER-X

SUPER ALL TRACTION* DELUXE CHAMPION*
*T.M.

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Some Soils Need Boron For High Yields of Peanuts

APPLICATIONS of boron increased yields of Early Runner and Dixie Runner peanuts grown on Blanton fine soil at the Gainesville Agricultural Experiment Station.

Using soil containers made from low-boron army surplus jugs, Dr. Henry C. Harris and R. L. Gilman of the Agronomy Department made this significant discovery in the greenhouse.

Grades of both varieties were also greatly improved by applying boron.

Peanuts without boron had a much higher percentage of hollow heart, a serious abnormality. The boron application practically eliminated this defect.

Boron has been tried experimentally in the field for years to improve peanut production. Yet little or no effect has been reported on either yield or quality.

Why is this the case when this element appeared to be so important in these greenhouse experiments?

The answer apparently lies in the fact that these experiments by Dr. Harris and Gilman were better controlled than field tests. Besides, some kinds of lime and fertilizer are known to contain boron.

Dr. Harris says that since lime is usually applied to peanuts, it could be that response to lime and other materials are confounded with the effect of boron, which is present as an impurity.

In these greenhouse peanut tests, no difference could be detected in the peanuts with or without boron until about 10 days before harvest. Then the boron-deficient peanuts developed stubby terminal branching. Shells of peanuts without boron often had cracks.

Nut yields with boron increased almost 300% over the boron-starved peanuts.

Grade or value of peanuts is determined by the amount of sound, plump seed. Without boron, there were about as many defective as good seeds. Boron almost eliminated the imperfection, and more than doubled the percentage of good seed.

Boron is one of the minor elements often on the short side in Florida soils. Although it is called "minor," it plays a major role in plant growth.

These experiments do not show the need for adding boron to peanut fertilizers right now.

However they do indicate that if boron is not present as an impurity in fertilizers that are applied to peanuts, the time could easily come when boron would be a limiting factor in peanut production—at least on some Florida soils.

Florida cotton acreage dropped from 319,000 acres in 1911 to only 22,000 acres in 1946.

Coming - - -
Next Issue - - -

Florida Takes A New Look At Irrigation

Fertilizer Tip

It isn't always wasteful to fertilize land that will yield more than 100 bushels of corn per acre without fertilizer.

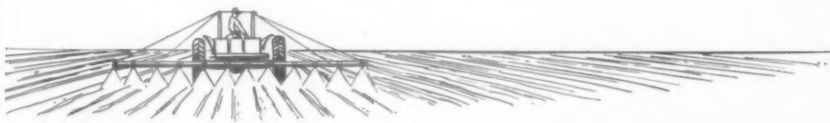
Applying fertilizer on land that produced 138 bushels of corn could boost yields by 21 bushels—to 159 bushels per acre. So report two University of Minnesota researchers.

Cost of the fertilizer in the test was $12; the yield increase, worth $25. Thus, the result was a net gain in profit of $13 per acre.

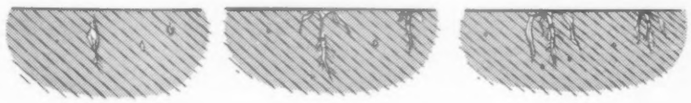
CUT HAND-WEEDING COSTS!

New Vegadex® weed-killing "blanket" can save you $20 to $90 per acre in vegetable crops!

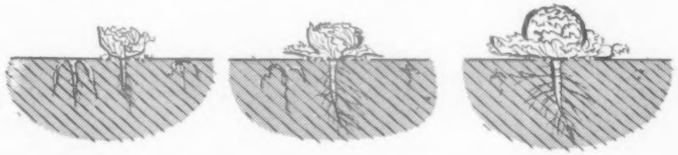
HOW VEGADEX KILLS WEEDS FOR YOU



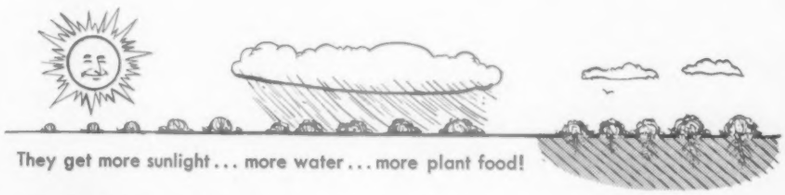
Spray on Vegadex when you plant. Invisible chemical "blanket" covers soil.



Grassy weeds sprout... touch Vegadex "blanket"... wither and die.



Your vegetables grow through unharmed with few weeds to fight.



They get more sunlight... more water... more plant food!

RESULT: You get bigger harvests... save $20 to $90 per acre on hand-weeding labor costs. (*A fact proved by commercial growers in their own fields.*)

This commercial grower band-sprayed Vegadex at planting. See how weeds smother untreated celery, at right, while treated rows, at left, grow clean, vigorous. Remember, you can spray Vegadex every time you plant—it won't build up in your soil.

Florida Growers...

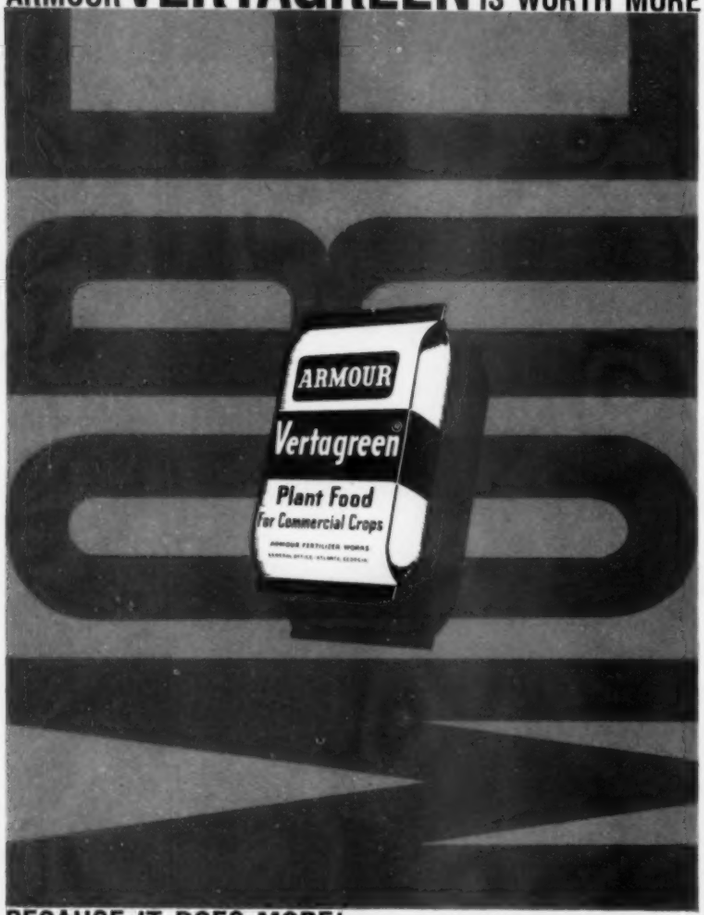
VEGADEX CONTROLS—purslane, pigweed, henbit (blueweed), annual bluegrass, bull grass (goose grass), crab grass, foxtails, barnyard grass, chickweed, lambsquarter.

VEGADEX IS SAFE FOR—celery, lettuce, broccoli, Brussels sprouts, cabbage, cauliflower, sweet corn, collards, kale, mustard greens, spinach, turnip greens, hanover salad, snap beans, lima beans, soybeans, field corn, garden beets.

Before you plant your next crop, see the Monsanto Farm Chemicals Dealer who displays this sign. He'll show you how spray-weeding with Vegadex eliminates nearly *all* costly hand weeding in your vegetable crops.

GROW MORE PROFITABLY
Monsanto
FARM CHEMICALS

ARMOUR VERTAGREEN® IS WORTH MORE



BECAUSE IT DOES MORE!

Florida dairymen and cattlemen report a great improvement in pastures fertilized with VERTAGREEN for Commercial Crops . . . *more* grazing per acre of nutritious forage for better milk and meat production per cow at *lower* feeding cost.

Successful citrus growers know—applying VERTAGREEN makes groves stronger and healthier, from the roots to the fruit . . . makes them better able to withstand adverse weather conditions. Armour VERTAGREEN brings groves to a fast full maturity of larger quality fruit, *worth* MORE PROFITS.

Ask your Armour Agent about VERTAGREEN and the other blended-for-Florida fertilizers by Armour, such as Big Crop and Quality Fruit Grower.

ARMOUR FERTILIZER WORKS, Jacksonville, Florida

THINKING of PLANTING or REPLANTING A GROVE?...

The high quality standard or certified stock you're looking for is available at Southern Groves Nurseries. Our nursery, featuring Florida's top citrus stock for planting from 5 to 5,000 acres, is open for your personal inspection.

SOUTHERN GROVES Inc.
P.O. Box 1400 Winter Haven, Fla.

Historic Milestones in Florida Agriculture

1906-35
Everglades drained.

1914
Agricultural Extension Service established by Congress.

1914-36
Cattle tick eradicated (reinfested 1942 [deer] & 1957).

1915-27
Citrus canker eradicated.

1915
Flood control program begun: Everglades Drainage District.

1917
State Livestock Sanitary Board established.

1918
Smith-Hughes Act established vocational agriculture.

1920-22
Discovery of Mn deficiency in Dade.

1922-26
Shade tobacco industry saved from blackshank diseases.

1924
Discovery of Cu deficiency in Everglades.

1925-32
Process developed for making dried citrus pulp.

1926
Marglobe tomato developed.

1927
4-H Club camp established.

1928
Florida Forest Service established.

1929-30
First Med-fly eradication.

1931
First pulp mill.

1933
Florida Agricultural Research Institute established.

1933-58
Agricultural Adjustment and successor programs.

1934
Cause of salt sick discovered.

1934-36
Discovery of widespread minor element deficiencies.

1935
Florida Citrus Commission established.

1935-55
Vast pasture improvement and development.

1935-36
Federal-State Frost Warning Service set up—Horticultural Protection Service, winter.

1936
Wilt resistant watermelon—Leesburg.

1936-37
Citrus nutrition program formulated.
White skin potatoes—Katahdin.

1937
State Soil Conservation District Law.

1937-38
Clover production in Florida made possible.

1938
Lupine introduced.

1938-40
Dry washed potatoes to prevent bacterial soft rot.

1940-present
Quick-frozen food industry.

1941
Seed of adapted hybrid corn released.

1943
Pensacola Bahia, Pangola, Coastal Bermuda grasses introduced.
Dixie Runner peanuts developed.

Continuous
Adapted varieties of oats developed.

1943-44
Chemical control of potato and tomato late blight.

1944
Chemical weed control.

1945
Vast new chemical industry for insect control (including systemics) DDT.

1945-50
Sweet corn industry developed.

1946-47
Frozen concentrate (first produced in late '30's) developed.

1947-48
Pre-packaging industry developed.

1948
Florida Citrus Mutual formed.
Central & Southern Florida Flood Control District established.
Soil fumigation materials available.

1951
Floranna clover released.
Early Runner peanuts developed.

1952
Citrus budwood certification program begun.

1953
Manalucie tomato developed.

1954
Burrowing nematode identified as cause of spreading decline.
Celery blackheart beaten.

1956
Gator rye released.

1957-58
Second Medfly eradication.

Two questions of vital importance to every farmer:

Are tough spots in your soil forcing you to sacrifice advertised tractor capacity?

Are you handling 3 bottoms with your so-called 4-plow tractor?

Case-o-matic DRIVE 600

PULLS FULL 4 BOTTOMS

and costs up to $250 less...

Turn the page to learn why this is not just a claim

BUT A DEMONSTRATABLE FACT!

→

Now you can forget about the tough spo

The 4-Plow Case-o-matic DRIVE® 60

automatically increases pull-power up to 100% –

With Case-o-matic DRIVE there is no compromise with tractor capacity

New Case-o-matic Drive 600 tractor pulls 4 bottoms instead of 3. Big plow capacity —up to 20 acres in a 10-hour day. 4 or 8 speed ranges. Gasoline or LP-gas engine. Choice of single or dual front wheels, or adjustable axle.

With Case-o-matic DRIVE there is no compromise with tractor capacity

New Case-o-matic Drive 400 tractor pulls 3 bottoms instead of 2. Plow up to 15 acres in a 10-hour day. 4 or 8 speed ranges. Gasoline or LP-gas engines. Choice of standard 4-wheel, row-crop models with dual wheels or adjustable front axle.

...pots...

...600 senses the tough spots instantly...

...with no clutching... no shifting... no stalling...

Get full advertised plow capacity

Are you one of the many farmers who is forced to plow with one less bottom or to plow in a lower gear simply because your conventional transmission tractor does not provide the capacity to get through the tough spots? A Case-o-matic Drive tractor eliminates this costly compromise with plow capacity, avoids slow down in plowing speed and stops to down-shift for tough spots. Case-o-matic Drive senses the load instantly and precisely . . . automatically increases pull-power up to 100% with no clutching, no shifting and no stalling. Case-o-matic Drive torque converter offers you the ideal balance of power-weight-torque ratio to handle tough spots easily. With Case-o-matic Drive reserve pull-power, you get *full* advertised plow capacity under all conditions all the time.

Save up to 32% in plowing time

Here's how to prove to yourself that a Case-o-matic Drive 600 tractor can save money and time. Ask your Case dealer to show you how you can save up to $250 in first costs. Now, get out your pencil and do a little figuring. Using the simple acres-plowed formula (cutting width in feet x speed in m.p.h.), you'll find that plowing with 4 bottoms instead of 3 permits you to plow 4⅔ *more* acres in a 10-hour day. Or, you can plow the same amount of ground in 25% less time. Do a little more figuring. Since you are probably plowing in a gear lower to avoid stops for shifting, you can also figure that a Case-o-matic Drive 600 tractor will let you plow faster—save at least 5% in plowing time. Then, add still another 2% for time saved on turns at headlands without clutching or shifting. These are real savings.

Get more work done per gallon of fuel

An actual fuel economy contest sponsored by a competitive dealer proved that a Case-o-matic Drive tractor will use less fuel per acre plowed. Here's what happened: a Case-o-matic Drive tractor plowed a 64-inch wide strip nearly 300 feet farther on 1 gallon of fuel than did its competition. In another revealing test, a Case-o-matic Drive tractor completed a specified plowing job in 15% less time, using the same amount of fuel. Because of its double pull-power reserve, Case-o-matic Drive tractors roll right through tough spots normally requiring a much heavier tractor with bigger engines that use more fuel. The reason: Case-o-matic Drive tractors provide the ideal power-weight-torque ratio for maximum engine efficiency and tractive effort with resulting fuel economy for heavy-draft loads on any farm job.

New Case-o-matic Drive 800 tractor pulls 5 bottoms instead of 4. Plow up to 25 acres in a 10-hour day. 8 forward speed ranges. Diesel, gasoline and LP-gas engines. Choice of single or dual front wheels or adjustable front axle.

Ask your Case dealer to show you how you can save time and money with

Case-o-matic DRIVE®

the revolutionary tractor that provides the ideal power-weight-torque ratio for maximum engine efficiency, tractive effort and fuel economy—regardless of how heavy the job or load.

Today! Ask your **CASE** dealer to prove to you that the foregoing statements are not just claims but demonstratable facts.

Prove to yourself that a
***Case-o-matic* DRIVE** tractor
will cut your plowing time as much as one-third, make measureable savings in fuel consumption.

Make this time and economy test. Put a measured amount of fuel in the tank. Hook onto a heavy draft load. Prove to yourself that a Case-o-matic Drive tractor will do more work per gallon of fuel, do more work per hour to cut your farming costs. See your Case dealer today.

If you want to save still more money on initial tractor costs, and don't need the tremendous reserve of pull-power and the many other Case-o-matic Drive tractor features, then ask your Case dealer to demonstrate the economy models 300, 500 and 700. And for giant power, look at the King of All Tractors—the 6-plow 900.

BUY NOW... pay later with CASE CROP-WAY PURCHASE PLAN

Start now to cut your farming costs with a Case-o-matic Drive tractor. The convenient Case Crop-Way Purchase Plan permits later payments as you have money coming in from crops or livestock.

Get all the facts FREE about revolutionary *Case-o-matic* DRIVE® tractors.....

Send for the full, exciting story clearly explained and illustrated in a colorful catalog. Also check below for catalogs you want on other Case machinery. Mail to J. I. Case Co., Dept. 98J, Racine, Wis.

- ☐ 3-plow Case-o-matic Drive 400 tractor
- ☐ 4-plow Case-o-matic Drive 600 tractor
- ☐ 5-plow Case-o-matic Drive 800 tractor
- ☐ New Case mounted moldboard plows
- ☐ New Case pull-type moldboard plows
- ☐ Disk plows
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- ☐ Subsoilers
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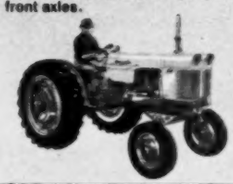
124 MODELS

200 2-Plow Gasoline Tractor; 4-speed, 12-speed tripl-range transmissions. Row crop with dual wheels or adjustable front axles; standard or constant PTO; Snap-lock Eagle-Hitch.

400 3+ Plow Tractor with Case-o-matic Drive; gasoline or LP-gas fuels; 4 or 8 working ranges, shuttle; standard 4-wheel, dual wheels, adjustable front axles.



600 4-Plow Tractor with Case-o-matic Drive; gasoline, LP-gas; 4 or 8 working ranges, shuttle; standard 4-wheel, row crop with single or dual wheels, adjustable front axles.

800 5-Plow Tractor with Case-o-matic Drive; diesel, gasoline, LP-gas; 8 power ranges; standard 4-wheel, row crop with single or dual front wheels, adjustable front axles.

310 Hi-torque 42 gross horsepower Case engine with 3-speed transmission. Hydraulics, PTO, belt pulley, toolbar-dozer combination and 3-point Snap-lock Hitch.

810 80 gross horsepower, with either diesel or gasoline engine and Terramatic transmission for independent power control of each track. Four gear ranges forward and reverse. Dual hydraulics . . . toolbar for implements . . . dozer available.

300 3-Plow Tractor; diesel, gasoline, LP-gas, distillate fuel; 4-speed 12-speed tripl-range and shuttle transmissions; standard 4-wheel, row crop with single or dual wheels, adjustable front axles.

500 3-4 Plow Tractor; gasoline, LP-gas; 4-speed, 12-speed tripl-range, shuttle transmissions; standard 4-wheel, row crop with single or dual wheels, adjustable front axles; complete hydraulics.

700 4-5 Plow Tractor; diesel, gasoline, LP-gas, distillate fuel; 8-speed dual-range transmission; standard 4-wheel, row crop with single or dual wheels, adjustable front axle; duo-control hydraulics and Eagle-Hitch.

900 6-Plow Tractor; diesel or LP-gas; 8 forward speeds; standard 4-wheel; power steering and duo-control hydraulics; deluxe Health Ride seat.

610 Choice of gas or diesel 62 gross horsepower engine, Terramatic transmission. Four gear ranges forward and reverse—hydraulic power shift. Dual hydraulics . . . rear mounted toolbar . . . dozer available.

1010 100 gross horsepower diesel engine, four gear ranges forward and reverse—hydraulic power shift and Terramatic transmission. Dual control hydraulics . . . rear mounted toolbar . . . dozer available.

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1st in Quality for Over 100 Years

THE AGRICULTURAL EXPERIMENT STATION staff of September 1910 consisted of these people. Front row, left to right: John M. Scott, later dairy superintendent of the State Department of Agriculture, now retired; C. K. McQuarrie, extension worker; Dr. P. H. Rolfs, director; John Belling; A. P. Spencer, later assistant director and director of the Agricultural Extension Service, now retired and living in Gainesville; H. S. Fawsett.

Second row: Dr. E. W. Berger, later entomologist for the State Plant Board; Miss Bertha Eves and Miss Katie Boulware, secretaries; and a Mr. Folks.

Third row: B. F. Floyd, S. E. Collinson, John Schnabel and Klein H. Graham. Mr Graham is still living.

Pictured in the top row: Dr. O. F. Burger, M. Crews and A. W. Blair.

Agricultural Research Paced 50 Years of Progress

Growth of the University of Florida Agricultural Experiment Stations during the past 50 years has been phenomenal as the research efforts kept pace with an advancing agriculture that is largely dependent on research.

In 1908, the Station's laboratories and personnel had just moved from Lake City to Gainesville, and the laboratories were not yet fully organized or equipped. Nonetheless, a considerable amount of experimentation was reported for that year.

With an income of less than $27,000, more than 85% of this—$24,000—came from federal Hatch and Adams funds. The state appropriation was $1,030 and "proceeds from farm produce and fees" amounted to $1,801.62. However, thanks to public appreciation of the value of research, today the Station receives $462,000 from federal funds and $4,283,706 from state appropriations. In addition, a number of grants from federal and private agencies enable the workers to do additional research.

It is only natural that the staff today would be much larger than it was 50 years ago, since advancing knowledge and techniques enable researchers to work more intensively and efficiently on a wider variety of problems, many of which were not known even 25 years ago.

Fifty years ago, the staff consisted of 14 people: the director, chemist and two assistants, animal industrialist, entomologist, two assistant plant physiologists, assistant in botany, assistant in horticulture, librarian, auditor and bookkeeper, farm foreman and gardener.

Today the staff of 300 works in 15 research departments, at 10 branch stations and 8 field laboratories, in addition to administration, editorial and library. Many of the 300 hold cooperative appointments with the U. S. Department of Agriculture; many others do teaching or extension work and are not full-time Experiment Station employees.

The 1908 Station report reveals four bulletins printed. Today, the number averages from three to four times that many . . . and the Station is even venturing into the book publishing business.

In 1908, the Station did print 31 press bulletins—mostly two pages in length. That series has been replaced by circulars. But in no recent year has the number published reached 31.

However, Station workers now appear regularly in television and radio programs—both of which were unknown in 1908.

Research workers are now harnessing radioactive rays in history-making studies of plants and animals as part of the 382 outlined projects under way, the Florida Station having the largest cobalt-60 irradiator in the country. This Station was first in the country to employ radioactive minerals—made possible through atomic science and the atom bomb—in studies with large animals—cows.

The researchers of today evaluate antibiotics in feeds and in disease control, hundreds of new and potent insecticides and other chemicals, and numerous other things undreamed of in 1908.

But prices in "the good old days" are something to be marveled at today. In his 1908 report, the animal industrialist says he bought cattle for a feeding test at 2.5 cents a pound and sold them for 3.5 cents and still lost money on the operation!

Charleston Grey:

disease-resistant, a superior shipper...

Here is your promise for greater harvest profits . . . an outstanding melon with quality ensured by the near century of vineseed specialization of Lawrence Robinson & Sons.

This popular watermelon has been especially developed for high resistance to Anthracnose and Fusariam Wilt, and to hollow heart, gourd neck and sunburn. Its greater vigor also makes it a superior shipper, reducing substantially possible losses between field and market.

Highly productive, averaging 35 pounds at maturity . . . unsurpassed like all Robinson Vineseed, because we specialize in only Vineseeds!

Available through authorized distributors and their dealers.

Lawrence Robinson & Sons
MODESTO, CALIFORNIA

Per-Acre Field Crop Yields Up in Florida

SUPERIOR VARIETIES, good seedbed preparation, liming, better systems for fertilization and control of pests. . . .

Widespread use of the above improved practices have consistently increased the per-acre yield of field crops in Florida in recent years, reports Extension agronomist J. R. Henderson.

Corn is the most important cereal crop grown in Florida. The average yield per acre in 1957 was 140% above that of 1946.

Yield per acre and total production of corn in Florida in 1957 was the highest on record. However the acreage harvested was the smallest since 1898.

Acreage of corn to be harvested, the yield per acre, and the total production are expected to be slightly higher in 1958 than in 1957.

Oats and wheat are used primarily as grazing crops. But a part of the acreage of each is harvested for grain or hogged-off after the grain is mature.

Probably due to less damage by crown rust, the average yield of oats and wheat acreage harvested in 1958 was the highest since 1953.

The acreage of permanent pasture continues to increase, but at a much slower rate than in the late 40's and early 50's. During the last few years, there has been a trend toward heavier fertilization of pastures and utilization of surplus forage as grass silage.

Increase in annual forage crops grown is notable this year, Henderson says, because of damage to permanent pastures during the past winter.

Moreover, he adds. the increases in acreage have been accompanied by increases in the use of small grains—winter legume combinations and pearl millet as green-chopped forage and in the harvesting of corn, sorghum and pearl millet for silage.

Tung Meal Toxins

USDA scientists have succeeded in isolating two toxins from tung meal. This, they say, is the first step toward finding a commercially practical method of detoxifying this meal.

A potentially valuable feedstuff, tung meal contains 22 to 25% protein. But because it is highly toxic to animals and poultry, up to now little use has been found for it except as a nitrogenous fertilizer.

The scientists have found that one of the toxins is insoluble in organic solvents and is easily detoxified by heat. The other toxic material has been found to be extractable by many organic solvents and is comparatively stable.

Heifer Management

(Continued from Page 17)

main buildings where they can be checked carefully each day. During the last month, they should be brought into the milking barn daily to accustom them to the routine.

Udders must be examined frequently because mastitis can occur before calving. And mastitis could seriously hamper the total productivity of affected animals.

For several weeks before calving, the feed must be very palatable, somewhat laxative, and high in protein. This seems to help prevent retained placentas and metabolic troubles like milk fever and ketosis.

This article is somewhat lacking in detail.

It is hoped, however, that by developing his replacement system within the framework of these principles, the modern dairyman will insure the health and productivity of his future herd.

And what could be more important?

"Vapam® saves me 90¢ of every dollar I used to pay for weed control!"

—Tom Katsuda, Oxnard, California

"For my money, Vapam Soil Fumigant answers the grower's weed problem once and for all.

"Last year we used Vapam over a 30-acre strawberry field foul with weeds. Results showed a 95% kill of Bermuda grass . . . a 90% kill of all other weeds. Hoeing costs are about 1/10th of what they were. We're looking for more strawberries, bigger profits."

Other growers say the same about Vapam. They like the way water-soluble Vapam wipes out weeds, nematodes and other soil pests. They know Vapam has proved itself in nurseries, orchard replant sites, seed beds, commercial vegetable acreage. And it is easy to apply. No ground covers. No other special equipment.

Your local dealer can tell you when and how to apply Vapam. Also ask him about Stauffer's complete line of farm chemicals, including Captan, the all-season fungicide, and the new wonder-working insecticide, Trithion®.

Stauffer Chemicals Since 1885

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Seventeen County Exhibits Set for North Florida Fair

Outstanding farm families of the 17 participating counties will be honored at the North Florida Fair.

Scheduled for Tuesday, October 28, through Saturday, November 1, the Fair will be held at Tallahassee. The exposition annually attracts some 70,000 visitors, according to Fair Manager and County Agent Lloyd Rhoden.

The 1958 Fair will offer about $20,000 in premium funds. There will be 118,000 square feet of enclosed exhibit space.

Counties participating in the North Florida Fair exhibit sponsorship are Calhoun, Columbia, Dixie, Escambia, Franklin, Gadsden, Gulf, Jackson, Jefferson, Leon, Liberty, Madison, Marion, Okaloosa, Taylor, Waukulla, and Gilchrist.

Opening day has been designated as Children's Day. It will be marked by a downtown parade.

Also booked for Tuesday, October 28, are an open barrow or fat hog show, the state Future Farmers of America swine show, a flower show and the state 4-H Club corn show.

School Day will be observed on Wednesday. There will also be judging in the:

Poultry show, crops show, women's department, state 4-H swine show, Shorthorn cattle show, Negro department, an open swine show, and a Hereford cattle show. In addition, all the barrows judged the previous day will be sold at auction.

County Day will be observed on Thursday. There will be judging in the Brahman cattle, swine carcass, flower, and Angus cattle shows.

Friday highlights will include a Press Day luncheon at Florida State University and the arrival of the outstanding farm families. That day also will honor Negro citizens.

Governor LeRoy Collins will be the main speaker when the outstanding farm families are honored at a banquet on Saturday. Closing day is also designated as 4-H Clubs and FFA Day.

"I know you grew up on the farm and know what it's like but you mustn't give them any more than their produce check calls for."

For A Faster Start

Pine seedlings get off to a faster start if the land has been prepared for the young trees.

Site preparation includes plowing wide fire lines around the area and, if necessary, burning off heavy roughs. Furrowing, scalping, and strip plowing also may be necessary.

Burning should be done only where brush and bushes would hinder planting. Furrowing helps survival on sites of poor sandy soil and during periods of low rainfall.

On areas of excessive moisture, such as poorly drained "crawfish flats," furrowing and setting seedlings on the furrow slices—instead of the furrow—increases survival.

Scalping is removing vegetation in a 12- to 20-inch band in the planting zone.

In Florida, the pine seedling planting season extends from November through February. Most of the plants are set in December and January.

"ORTHO products mean money in the bank to growers,"

states Jeff Davis, production manager of Caroline Flower Farms, growing corn, cucumber, eggplant, and gladioli at Ft. Myers, Florida. "ORTHO products are the best I have ever used for fungicide and pesticide controls," Mr. Davis says.

A complete ORTHO program can give you more complete crop protection—higher yields, better prices

When you buy the ORTHO program, all the personal, on-your-ground technical advice and services of your ORTHO Fieldman are provided gladly and without any extra charge. Too, with ORTHO, you're associated with the leader. An ORTHO program gives you benefit of *all* the technical background—all the laboratory and field research—and *all* the formulating skills that have made ORTHO the number one line of agricultural chemicals in America today.

ON ALL CHEMICALS, READ DIRECTIONS AND CAUTIONS BEFORE USE

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Contact these ORTHO Fieldmen:

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Boynton Beach—Walter Whittaker
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Lake Alfred—J. S. Murphy, Jr.
Lakeland—Jean E. Mabry
Leesburg—Charles Ashley
Miami—Dick Acree
Orlando—Cliff Sutton
Orlando—John Howell
West Palm Beach—Luke D. Dohner
West Palm Beach—Perry L. Sparkman

Formulative Years

(Continued from Page 12)

Florida cattlemen of that day were for free range. Cattle roamed at will throughout the countryside, endangering traffic and destroying truck crops.

Attempts to pass a "No Fence" law were beaten down time after time by the powerful cattle barons who were content to raise scrub stock on open ranges.

When development of the trucking industry got underway in south Florida, newcomers would build fences around their property in an attempt to keep roaming cattle out —only to wake up some morning to find a herd of cattle in the corn and their fences down, the barbed wire neatly clipped by playful range riders.

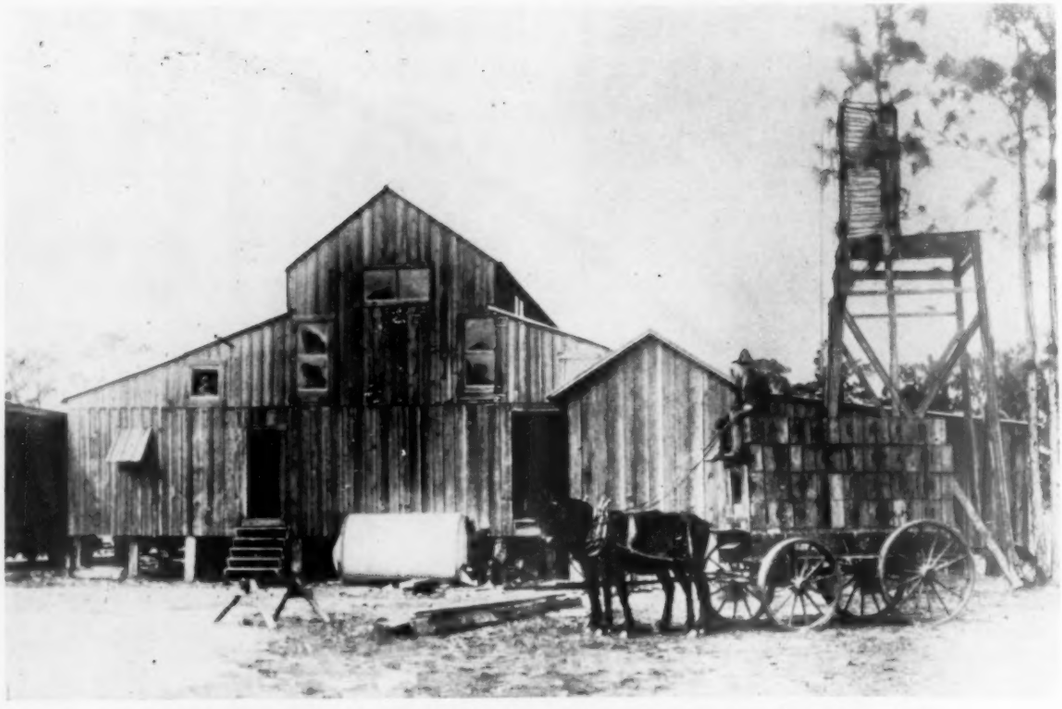
Tax collectors made little effort to assess cattle. Nobody knew who owned what . . . or where it was.

Cattle tick infestations were rampant on the range. Yet when the state began its campaign to eliminate the tick, it got little cooperation from cattle interests and many dipping vats were blown up in an effort to halt the program.

Edgar Wright knew that Florida would never get anywhere as a cattle state as long as we had free range and tick intestations. So he threw the full support of the FLORIDA GROWER behind the program to get cattle off our highways and behind fences and to eliminate the tick.

He made some bitter enemies among the cattlemen. But he was applauded and supported by farmers and growers who were working and investing their money to give Florida a sound, diversified agricultural development.

Wright did not live to see cattle driven from our highways or the end of the cattle tick. However his courageous fight for the program over the years had much to do with bringing it about and giving Florida the great cattle industry it has today. Achievement in Florida's cattle industry of late years has borne out his predictions.



HERE'S HOW the Waverly packing house looked in January 1915—a far cry from the modern buildings of today.

In 1914, citrus production was about 8 million boxes. Practically all of it was sold as fresh fruit on the auction markets.

Newcomers were setting out groves all over the state. And the cry of "over-production" echoed and re-echoed throughout the state.

There was little or no processing at that time. Nevertheless the FLORIDA GROWER encouraged citrus development. It contended that as new groves came into bearing and the volume of fruit increased, a profitable market would be found through expanded sales efforts and in by-products.

An infestation of citrus canker struck the state in 1914 and began spreading rapidly.

For a time it appeared that the industry was doomed; there was no money to conduct a fight, no organization or laws. And the situation seemed too desperate to wait for legislative action.

But a meeting of growers was called. Citrus authorities and experiment station men pulled no punches in urging the participants to destroy all canker-infested groves as the only means of combatting the situation.

Digging into their own pockets, growers voluntarily contributed one dollar per acre toward the fight. Then they stood by and saw their groves burned, with only a hope that the state or federal government would somehow reimburse them for their loss.

This was a trying period, one that separated the men from the boys in the citrus industry. And Edgar Wright was in the thick of it.

With editorials and feature articles, he fought through the columns of the magazine, urging a united front of all interests—growers, business leaders, civic groups—to save the industry. He pointed out that this was not a grower problem alone, but one that affected the whole economic structure of the state.

Eventually, the fight was won. And while it was a tremendous blow to the industry of that day, it served to awaken people to the danger of permitting the entry of disastrous pests or diseases. It also

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ORCHARD BRAND
REG. U.S. PAT. OFF.
SPRAYS & DUSTS
REG. U.S. PAT. OFF.

To get more profit from your orchards and fields—for higher quality yields—use Orchard® Brand sprays and dusts. They're specially formulated to give you maximum efficiency . . . uniform coverage . . . high insect kill. They're *profit boosters!*

The right product for every pest problem!

Sprays and dusts containing:

Parathion	Agri-Mycin*	Aldrin
Lead Arsenate	TDE	Dieldrin
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See your Orchard Brand dealer soon!

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resulted in a tightening of customs regulations, more careful plant inspection, and the setting up of a stronger Plant Board as a future safeguard.

Not all agricultural efforts favored by the FLORIDA GROWER proved successful.

Because of the success with pineapple growing around Ft. Pierce on the East Coast and Punta Gorda on the West, Wright believed that there was a big future for this crop in Florida for it certainly did look promising. But he could not foresee the diseases that eventually wiped out the industry and proved it impractical.

Another effort endorsed and publicized by the GROWER was the growing of castor oil beans. When the supply of castor oil was cut off during World War I, it was believed that Florida could produce the nation's needs. And as castor oil was used in airplanes, it looked like a most promising deal.

However, for one reason or another, plants failed to thrive and produce. So the effort was given up.

Florida would "roll over and play dead" throughout the summer in those days. Many stores, hotels, restaurants and businesses closed for several months, and did not reopen until the next "season."

It was an accepted belief that you *had* to have a "slump" in the summer—and that there was no use trying to offset it.

This just didn't make sense to me. So I approached the boss with the idea that we flaunt tradition and put out a special "Mid-Summer Number of the FLORIDA GROWER."

Wright was sceptical; he didn't think a sufficient number of advertisers would go for the idea to make it possible to put out a creditable summer feature issue.

But he was the kind of man who was always willing to give a fellow a chance. So he told me:

"Alright son; if you think you can do it, go ahead. It is your responsibility. I'll give you all the rope you want, but try not to hang yourself."

Fortunately, I had worked under one of the ablest special edition men in the country at that time, Bill Porter who handled the Mid-Winter Edition of the *Los Angeles Times*.

However, this was my first effort on my own—and I'll admit I was scared and a bit doubtful myself. Just the same, I tackled the job and put everything I had in it.

Contacting agricultural and real estate advertisers, chambers of commerce, civic groups and everyone else I could think of, I contended that there was no reason why we had to have a "summer slump." I argued:

"Florida has just as much to offer in the summer as at any other time, more in some respects. Our summer climate is better than is found in most other states. We have better beaches and points of interest to visit. So let's tell the world about it through the FLORIDA GROWER."

Up to that time, the largest issue we had ever run was 32 pages—and I had my sights set on 40 pages.

A lot of folks thought I was crazy . . . and for awhile I was inclined to agree, for the business was slow coming in at first. People just weren't in the custom of going all out for business in the summer time.

Then some of my chamber of commerce and realtor friends got

(Continued on Page 56)

"BIGGER YIELD— BETTER QUALITY MUCH MORE PROFIT

from using

"NA-CHURS"

LIQUID FERTILIZER"

That's the report of Charles E. Rhoden of Boynton Beach, after using "Na-Churs" Liquid Fertilizer for supplemental foliage feeding on his cucumber crop.

"SAVES ON LABOR"

Hollie Hook of Douglas Lake Nursery at Groveland says: " 'Na-Churs' Liquid Fertilizer helped promote vigorous growth of young citrus trees and saved tremendously on labor and other costs at the same time."

"MORE GROWTH"

H. C. Jones of Boynton Beach reports: "Healthier eggplant and beans with more vital growth and leaves; response and yield were wonderful."

FOLIAGE FEEDING

Introducing the vital nutrients into the growing plant through the leaves and stems is particularly helpful when soil moisture is inadequate or when the roots are actually waterlogged. Most of the liquid nutrients are soon absorbed by the plant and put to use to help promote steady growth which in turn can help create a resistance to attacks of cold weather.

HELP CROPS OVERCOME COLD WEATHER DAMAGE
For a real shot-in-the-arm, use foliage feeding now!

Get the facts from your "Na-Churs" Crop Service Representative, or send for free booklets below:

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P.O. BOX 246
SAVANNAH, GEORGIA

IT'S DOUBLE BARRELED

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Francis Higel

(Continued from Page 4)

A native of Alsac-Lorraine, he stowed away on a sailing vessel and came to America at the age of 12. Finally settling in Philadelphia, he grew up there the best he could and married a Dutch girl named Addie Kerchoff.

Since he had a scientific mind, he was always experimenting with various items in his spare time. After serving in the Union Navy during the War Between the States, he returned to Philadelphia and his experiments.

This time he discovered a way to process glucose from cassava. So he persuaded his good friend and neighbor, Hamilton Disston, to finance him in this undertaking.

In 1881, he left Atlantic City in a canoe and started a search for a land where cassava could be grown commercially. After going around the Florida Straits and heading north, he finally landed in the territory now known as Venice. At that time, the area was known as Horse and Chaise Point because from several miles at sea, the timber line looks exactly like a horse drawing a carriage.

After looking around, Higel went back to Philadelphia to tell Disston he had found the ideal location for the processing plant. As a result, Disston formed a company and purchased from the Trustees of Internal Improvement four million acres and paid the State of Florida $1 million in cash.

Higel, his wife and six sons came back to Florida for good in 1882. They landed in Tampa, which had no paved streets and was the end of the railroad.

From there, they took a boat up the Manatee River and landed in Manatee. Then, since all the small rivers and creeks could be forded at low tide, they drove by horse and wagon.

Upon settling, Higel decided to name the area Venice. This was because all the little bays and bayous reminded him of Venice, Italy.

Disston however refused to go ahead with the processing deal because of a freeze in this subtropical land. Higel nevertheless set up his own shop for the processing of citrus and other tropical fruit products.

Francis Higel was, to answer our question, a man of pioneer courage. More than that, he was a man of enormous ability and foresight. He was a forerunner of modern citrus advertising and merchandising.

* * *

How smart are you

(Answers to Questions on Page 2)

1. *Heidelberg, Germany — to a man reconstructed from a jaw bone found near there.*
2. *Yes.*
3. *Dragonflies cannot sting.*
4. *Louisiana.*
5. *About seven-eighths.*
6. *For their discoverer, Juan Bermudez.*
7. *The moon.*
8. *At the south pole, due to the greater elevation.*
9. *Two.*
10. *Thomas Jefferson, who brought a waffle iron from Holland.*

Control soil diseases

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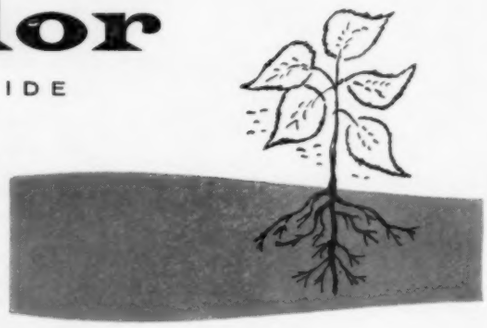

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Lettuce (Leaf Drop, Bottom Rot)
Potatoes (Scab, Rhizoctonia)

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- provides more efficient use of fertilizer and water
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Other Terraclor uses

Turf (Brown Patch)—Terraclor gives excellent control of Brown Patch and the longer residual action means fewer applications.

Ornamentals (Stem Rot, Root Rot, Crown Rot, Black Rot, Blight)—Terraclor increases yields of high quality flowers and bulbs, provides well developed root systems and promotes uniform and timely flowering.

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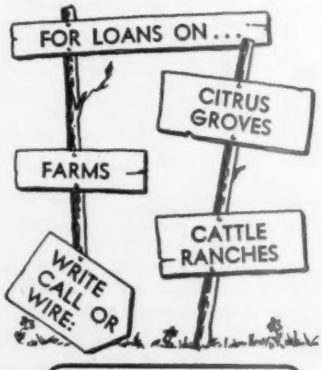

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FINISHING TOUCHES on a new Farmall tractor were applied by C. A. Drysdale (left) International Harvester zone manager, and Lester E. Oglesby, IH sales promotion supervisor, the day before the Plant City field demonstration.

Florida Field Demonstrations

THREE RECENT International Harvester field demonstrations in Florida pulled some 15,000 farmers out to see approximately 100 pieces of equipment. All types of machinery, from wagons to heavy commercial units, were displayed. There were 10 completely new tractors, or which there are 225 different models, in the tractor parade.

Many farmers saw such items as hay conditioners for the first time. This is a machine that squeezes the water out of the hay, thereby allowing it to be bailed with less exposure to the elements.

Cut-away components of IH implements such as torque amplifiers and independent power take-offs demonstrated to farmers the mechanics of the new equipment. Commercial equipment including backhoes, loaders, etc. were of particular interest to large farm operators and men in allied fields having use for these tools.

To handle yourself, use your head; to handle others, use your heart.

Speaking of "better mousetraps," there's one that electrocutes up to five mice without resetting.

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Winter Care and Management of Bulls

By DR. T. J. CUNHA
Animal Husbandry & Nutrition Department Head
Florida Agricultural Experiment Stations

FEW CATTLEMEN can afford to throw money away.

Yet, figuratively speaking, that is exactly what many of them are doing when they fail to realize the tremendous importance of the winter care and management of bulls. This phase of beef production is as important as the purchasing of a high quality bull to begin with.

How well the bull is taken care of will largely determine how effective he will be in breeding and settling the cow herd.

Still, it is surprising to note how many people will travel long distances and spend a great deal of money for bulls . . . only to mistreat or mismanage the expensive animals after they arrive at their place.

Winter is the critical period in managing bulls in Florida. This is when the pastures are usually short, and when many bulls are allowed to get too thin just before the breeding season begins in late winter or early spring.

A thin bull turned out with the cow herd has two strikes against him at the start:

In the beginning, he will settle a few cows. But he will soon get thinner, and then will become temporarily sterile because of a lack of viable sperm in the semen.

Thin, underfed bulls are one of the prime reasons for a low calf crop in Florida.

During the winter, the bull should be fed a ration which will have him strong and vigorous—but not over-fat—by spring. Since the breeding season is a period of strenuous activity, the bull must be in good physical condition in order to remain active and fertile.

The bull should be fed a ration which supplies the protein, minerals, vitamins and energy he needs. A good clover pasture—or some temporary pasture such as oats, rye, wheat or other forage—will supply good winter feed.

If the bull is thin to begin with, some grain as well as protein supplement will need to be fed. The amount to feed will depend upon the condition of the bull and the pasture he is on.

Also, the bull should have an adequate supply of clean, fresh water and a covered mineral box which is always kept full of minerals.

Highly fitted bulls purchased during the winter should be let down in condition gradually.

Never turn highly fitted bulls being fed large quantities of grain out on pasture and discontinue grain feeding all at once. Harmful effects will occur.

Some of the bulls will become temporarily sterile and will not settle the cows. Some may develop trouble in walking and in mounting the cows. And others may never again be too good as breeding bulls.

Consequently, one should continue to feed grain and gradually lower the amount until the bull has lost the desired amount of weight.

Bulls in about the right condition for breeding will be found at many purebred sales. These bulls have not been highly fitted; thus only a small quantity of grain feeding will keep them in good condition.

Young bulls should be fed more liberally than old, mature animals. This is because their growth requirements must be taken care of before any improvement in condition can take place.

Adequate exercise during the winter prior to the breeding season is of help in hardening a bull for service on the range.

Keeping the bull's feet and legs in proper condition is also important. A bull is worthless unless his feet and legs are sound.

Excess hoof growth on bulls should be trimmed periodically, and especially before the breeding season. Foot trimming needs to be done more frequently in Florida since our soils are not as effective in wearing down hoofs as are soils in other parts of the country.

The trimming should be done early, before the feet get so bad they become permanently injured. Many good bulls have been ruined in Florida because the owner did not trim their feet.

Cattlemen should also be continually on guard against foot-rot as soon as lameness appears. If caught early, it can be easily treated.

However advanced cases of foot-rot can be cured only with difficulty and, usually, considerable expense.

Purchased bulls should be carefully examined for disease or injury. They should also be isolated for at least 30—and preferably 60—days after arriving on the ranch.

Following the isolation period, the bulls should be tested by a veterinarian to make sure they are still disease-free. This is very important, since a diseased bull can do a great deal of harm in a herd.

A little precaution in preventing the use of a diseased bull will pay big dividends.

If a bull is properly managed, he can still be a vigorous and reliable breeder up to 10 years of age. And occasionally, a bull of more than 10 years of age will prove a good breeder.

Good management includes a well-balanced feeding program, plenty of exercise and proper distribution of services so the bull is not overworked. Good management also includes keeping the bull in good breeding condition, which means he should be neither too fat nor too thin.

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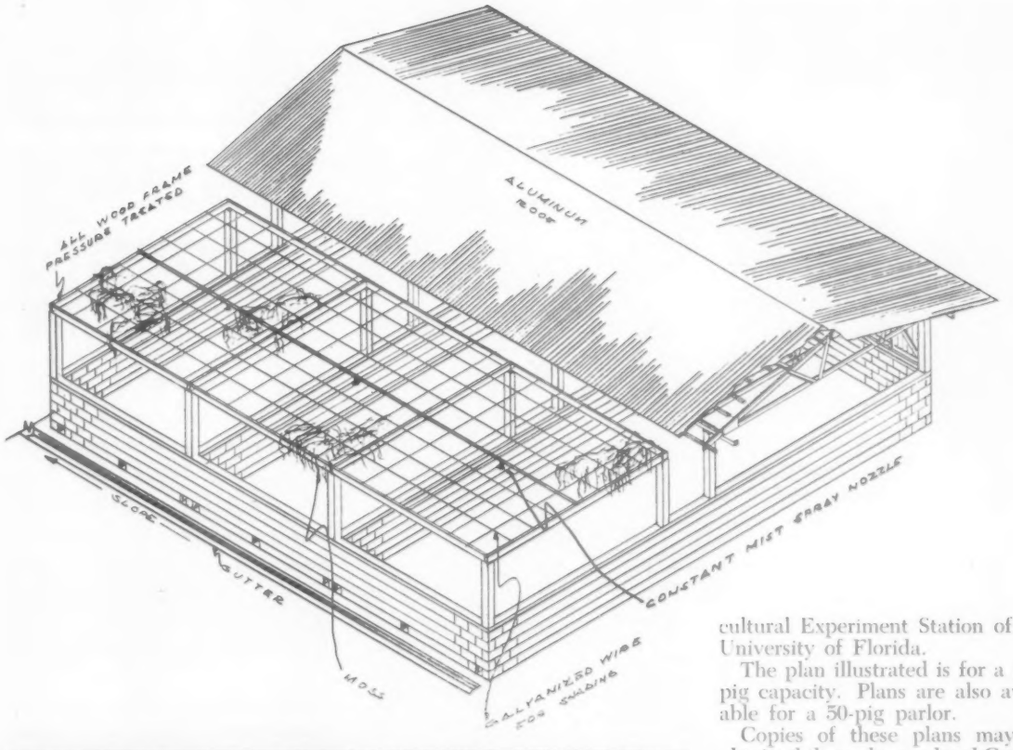

Good Plans for GOOD BUILDING

By T. C. SKINNER — Extension Agricultural Engineer, Florida Agricultural Extension Service

Pig Parlors for Florida

One of the newest innovations in swine production is the "Pig Parlor."

Because it offers an economical and efficient method for feeding out hogs for market, the pig parlor has caught the interest and imagination of swine producers everywhere. Yet, it is a very simple type of structure.

It consists of a concrete slab, which is covered by a roof on one part and is open on the other. The slab is sloped toward a gutter for good drainage and ease of cleaning.

A slope may be constructed over the open part of the structure. Also, constant mist spray nozzles may be installed to provide cooling for the hogs in summer.

Shown here is a plan developed by staff members of the Agricultural Extension Service and Agricultural Experiment Station of the University of Florida.

The plan illustrated is for a 100-pig capacity. Plans are also available for a 50-pig parlor.

Copies of these plans may be obtained through your local County Agricultural Agent's office or by writing to the Extension Agricultural Engineer, Agricultural Extension Service, University of Florida, Gainesville, Florida:

Ask for: Florida Plan 517 (100 capacity) and/or Florida Plan 518 (50 capacity).

* * *

Corn Harvest

Florida harvests more than a half-million acres of corn annually. The high, 649,000 acres, was reached in 1946; the low in 1957, when 557,000 acres were harvested.

* * *

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Citrus Pest Control

(Continued from Page 25)

sulfur dust may be used against light infestations, but is not so effective as a good spray.

Systox at ½ to 1 pint per 100 gallons is safe to use on any variety and may be applied up to 21 days before harvest. Lower dosages of Systox may give a good clean-up, but a shortened period of control. Like all miticides, Systox is most effective during cool weather.

Rust mite control: Several materials may now be used for rust mite control. The most effective is zineb, which should be used at ½ pound per 100 gallons or 3 pounds per 500 gallon tank. Zineb may be used with any of the materials listed for red spider control. However, experimental results have indicated that DN Dry Mix No. 1 is less effective with zineb than with sulfur.

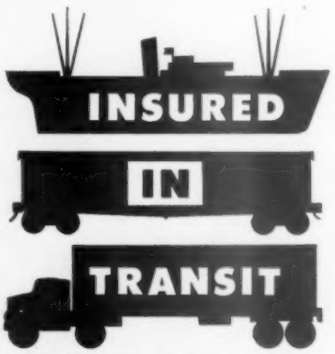
The second most effective material against rust mite is Chlorobenzilate. This miticide is also compatible with any of the materials listed for red spider control, but should not be used in any alkaline spray. Chlorobenzilate should be used at not less than ½ pound of the powder or ½ pint of the liquid per 100 gallons. At this dosage it will also give a quick kill of purple mite, but no lasting control.

Wettable sulfur at 10 pounds per 100 gallons and Trithion at 1 pound have given about equal control of rust mite.

Grasshoppers control: Grasshoppers frequently become numerous on the cover crop during late summer and in the fall and then feed on citrus when the grove is chopped. They also frequently migrate into citrus groves from adjoining grasslands and brushy areas. Several species of hoppers attack citrus and all can be very injurious. Young trees may be partially or even completely defoliated in a few days. Parathion at 3 pounds of 15 percent material per acre will give a quick clean-up that is often sufficient. When hoppers are moving in from adjoining areas, however, control is only temporary. Chlordane, toxephene, lindane, aldrin, and dieldrin are materials that give longer control.

Plant bug control: Plant bugs often develop on citron melons and then feed on the ripening citrus and cause it to drop. All varieties of citrus are attacked, but early varieties are usually most seriously affected. Plant bugs may be controlled with the materials used against grasshoppers.

Details of spray schedules and the various materials used will be found in the "Better Fruit Program" and this should be consulted to determine which materials may or may not be combined. For further information, consult the Citrus Experiment Station at Lake Alfred or Fort Pierce.



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Use of Insecticides Not New

"The use of insecticides dates as far back as the first century A. D. Pliny (Roman naturalist) recommended hellebore, the powdered root of a poisonous plant of the lily family, for the control of insect pests."

So pointed out Henry H. Ture, Rohm & Haas entomologist stationed at Fort Lauderdale, during the Florida Entomological Society's recent annual meeting in Tampa.

If insect pests were unchecked, Ture continued, the production of food—including fruits, vegetables, meats, and dairy products—as well as tobacco and fiber would, by comparison with present production, be insufficient.

"Certainly," the speaker added, "without insect control, we would not begin to approach our present importance as a food-producing nation."

Pyrethrum is probably the oldest insecticide which is now in anything like general use. The use of arsenicals began with the employment of paris green on Colorado potato beetles when this pest spread rapidly eastward to the Atlantic Coast about 75 years ago.

The arsenicals have been prominent insecticidal materials since that time. They were the chief insecticides used until the revolutionary developments of the 1940's

Since the advent of the modern materials, the field of chemical insecticides has become increasingly complex. And it is ever-changing.

Never before has it been necessary to know which ingredients to use for the formulation of a particular insecticide, and to know the proper method and timing application to achieve the best possible control.

The properly-trained, well-informed and conscientious entomologist can give important assistance to the grower by advising him as to the use of proper materials in order to get the best results, Ture concluded.

* * *

Florida - Adapted Clover

Several varieties of white clover, red clover and alfalfa are adapted to Florida, reports Dr. Gordon B. Killinger, Agricultural Experiment Station agronomist. He has been conducting tests with them since 1941.

White clover varieties which showed up best in tests at Gainesville are Louisiana S-1, Nolin Improved Louisiana White, and Louisiana White. Yields averaged from 4,000 to 6,000 pounds of dry forage per acre per year.

Dr. Killinger says red clover has been grown successfully in central and north central Florida for the past 10 years. Varieties he recommends are Louisiana Red St. 1, Nolin's Red, and certified seed of Port Gibson, Pennscott, and Kenland.

Recommended varieties of alfalfa are Hairy Peruvian, Arizona Chilean, African, and Indian. Peruvian and Chilean are recommended for both north central and south Florida.

Seeding dates for white and red clover are late October to early December. Alfalfa should be seeded during September.

Inoculation of the seed at five times the rate suggested by the manufacturer of the inoculant is recommended by Dr. Killinger.

* * *

Florida produces about one-fourth of all watermelons grown in the United States.

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Living IN FLORIDA

By BARBARA CLENDINEN

YOUR WAISTLINE can wander at will this season.

It can tie snugly under the bosom with an Empire bow or girdle your hips with a flat fold. It can disappear altogether in a trapeze flare or pinch you in where nature intended.

This is glorious news to those of us who've stared gloomily at the chemise. The sack, praise the paris designers, is out. And the chemise is so modified that it's pleasantly wearable.

The blouson back (the loose, draped look that came in last year) is still good. It's especially kind to hips, slimming them magically.

Colors are heavenly this Fall. Rich clarets, sapphire blues, gleaming golds and shocking pinks highlight the fashion rainbow. Printed velveteens and satins are smart.

One of the handsomest coats I've seen is pictured here, a water-repellent, rose-printed velveteen that will take you smoothly through autumn showers and chills.

Another dashing number is a three-quarter length coat in cotton canvas, eyecatchingly collared in skunk.

Still a third that qualified for my notebook was a wide-wale corduroy shortie with a hip-length belt and a huge collar.

One of my pet loves this season is what designers like to call the theater suit. Far as we are from Broadway's lights, we transform its use into dinner and cocktail wear—and bless the boys who thought it up.

Shocking pink velveteen (almost cerise, this is) makes one of these, with a pencil slim sheath and a jacket that's just at the natural waistline and only faintly boxed. It's collared in the material and buttoned in brilliants.

THEATER SUIT

Copied in emerald, russet, or black, it would be equally wonderful.

I can't say I'm completely charmed with this year's blouses. Some of them look as though they left the seamstress' hands too soon—and the hiplength overblouse, while smart for the young-and-narrows, does unkind things to most of us.

Careful shopping turns up traditional lines, however. And if you're past campus age or width, you'd best stick to these.

Hats are a story in themselves this fall. They're romantic and a little mad—and in many cases unbecoming.

But there are piquant profile caps with sweeping pheasant feathers, wide-brimmed velvet late-day hats and bequiling versions of the poke bonnet. It takes height to wear the heavy-crowned craft-laden with flowers—and courage to flaunt the Iris March floppy brimmed casuals.

I can't throw too many orchids at this season's shoes. They're prettier and more feminine than they've been in years. If you don't feel like a Cinderella in them, it's just too late for that Prince Charming!

YARD & GARDEN

By MARGUERITE SCHWAEN

STARTING A fall garden with banded seedlings is by far the most convenient method. If the soil is covered with a cutworm repellent, most of the hazards of beginning a flower bed have been removed.

Fresh annual plants are usually put on the market every day during planting season. And when they are purchased in moist little bundles at local stores, there is a time lapse from seed bed to flower bed that is unavoidable.

But, if handled properly before transplanting, these plants prove quite satisfactory. The seedlings should be refreshed by soaking them in a weak solution of soluble plant food for about 30 minutes to restore them to their normal vigor before transplanting.

Unless the flower bed has been sterilized, it is advantageous to make a collar of stiff paper and place it around each seedling to protect the plant from cutworm damage. The collar should be about four inches in width, with two inches placed underground and two inches above the soil.

Diameter of the collar is determined by the size of the seedling, but a nine-inch strip is usually sufficient. Old envelopes or double folds of slick magazine paper make excellent collar bands.

You'll find that these paper collars protect small plants from the ravages of dogs and cats, as well as from worms.

The loss of their fine hair-like roots during the transplanting process prevents the seedlings from taking adequate moisture from the soil for a few days until new roots are established. During this period, a spray mist over the foliage once or twice daily—depending on the temperature—insures moisture through the leaves.

Shading newly-planted seedlings is helpful too. Small mounds of material like Spanish moss placed over the plants is often all that is required. Care should be taken when removing the moss to prevent stripping of the leaves or uprooting the plant.

"Little Sweetheart," the dwarf sweetpea that grows in clumps to a height of eight to 12 inches, was a popular introduction last year. This Spencer sweetpea made a lot of friends and will be used more widely this season now that so many gardeners are convinced of its possibilities.

The flowers are full size, but the stems are short. The plants bunch and form mounds which are covered with fragrant flowers of many colors. The blooming period is as long as cool weather permits; sweetpeas do not tolerate hot weather.

However, they can stand almost any amount of moisture. It's hard to give them too much water.

Seeds should be sown where the plants are to grow. Deep, rich soil is required.

When luscious bunches of purple grapes appear in the markets each year, there swells in the breast of many Florida gardeners a twinge for a grape arbor in their own backyard.

I caught this feeling recently when I saw at Pompano Beach a simulated arbor made of sea grapes (*Cocoloba uvifera*) with bunches of grapes hanging through the big red-veined leaves. The arbor was made of two rows of seagrapes planted six feet apart and permitted to grow to tree size. The lower branches had been removed and the upper branches spread out umbrella fashion, making a perfect arbor.

Dense and cool was the shade, and the ripening grapes finished a charming picture. A paved walkway under the trees added to the effect.

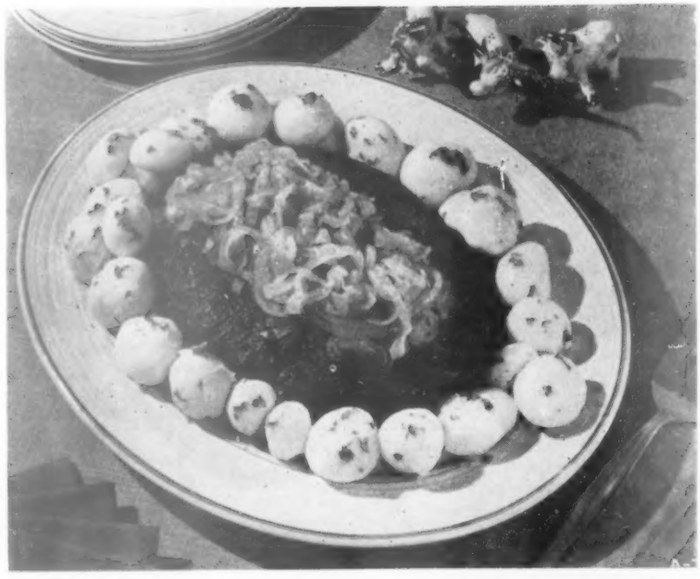
There is a grape vine available known as the Tamiami and it is considered by many the best grape developed yet for central and south Florida. It has been developed by a hybridizer in South Miami who is continuing his search for the perfect grape for Florida.

Similar to the Concord grape, the Tamiami is not quite as large and not as sweet. But the bunches are full and of good size. The vines are vigorous and they require no special soil consideration.

Until a better grape is hybridized, the Tamiami will fill the requirements for a grape arbor in Florida.

Meat Makes the Meal

By LORA A. KISER



Succulent and Tender Pot Roast

MEAT MAKES the meal—*if* it's cooked properly.

Gourmets agree that the success of each cut depends upon the cook. A choice porterhouse steak can be tasteless (and at what a price!) if it's braised. And a low-grade round steak can defy the strongest teeth if it's broiled.

Because so many homemakers, both beginners and veterans, have talked to me about sad experiences with meat dollars, here is basic information on the proper cookery.

There are two general methods of meat cookery, one using moist heat —the other, dry heat.

Moist heat means the use of water sauces or steam. Tough cuts grow tender with long, slow cooking in moisture. That's because it softens the connective tissue which is the troublesome part.

Pot roasting is an example of moist heat cooking that's called braising. This employs either a small amount of liquid or none at all in a closely covered utensil.

Roasts suitable for this treatment are beef arm or blade, heel of the round and rolled plate. Steaks like beef chuck, beef round, veal sirloin and pork shoulder qualify here, also. So do veal loin or rib chops, pork loin or rib and lamb shoulder.

(You know, of course, that lamb rib or loin chops are delectable when broiled. The problem there is paying for them.)

Here's how to achieve a succulently tender, richly brown pot roast:

Melt a small amount of fat in a heavy kettle or pot. Dredge the roast lightly with flour and brown it slowly on all sides. Season it with salt and pepper, add a small amount of liquid (water, beef broth or tomato juice).

Cover closely and cook slowly. This can be done atop the range at low heat or in a slow oven at not more than 300 degrees. A three to five pound roast requires 40 to 50 minutes per pound.

Add vegetables (well-scrubbed little potatoes, whole carrots and whole small onions) just long enough before serving time for thorough cooking.

When the roast and vegetables are tender, remove them and keep warm while you stir flour and seasonings, plus hot water, into the drippings to make a savory gravy.

Dry heat cookery is roasting, broiling and pan broiling. This is for tender cuts only.

Large cuts that qualify for roasting are standing rib roast, ham, leg of lamb, pork loin, rolled beef rib and cushion shoulder of lamb.

Cuts suitable for broiling are lamb rib and loin chops, bacon, smoked ham slice, sirloin, T-bone, porterhouse and filet steaks.

To roast a kingly standing rib roast:

Season with salt and pepper. Use an open shallow pan with a rack. The rack prevents the meat from cooking in its own juices.

Place the roast on the rack, fat side up. This way it's self-basting. Insert a meat thermometer into the center of the thickest part. This will accurately determine exact doneness.

Do not cover such a roast—and do not profane with water! Roast it in a slow oven at 300 degrees. (Of course you don't sear this roast before placing in the oven, either.)

The time required is 18 to 20 minutes per pound for rare beef, 22 to 25 minutes per pound for medium and 27 to 30 minutes per pound for well-done. For boneless cuts, add 5 to 10 minutes per pound to foregoing cooking times.

All roasts should be carved across the grain, to yield tender, well formed slices.

Remember to keep the temperatures low *always* for less shrinkage, richer flavor, juicier texture, and cleaner drippings.

BEST RECIPE of THE MONTH

HOBGOBLINS won't harry your household if you have a supply of these Hallowe'en treats on hand. Suggested by FLORIDA GROWER *and* RANCHER readers, they're prizewinners in this month's recipe contest.

From the DeLand kitchen of Mrs. George O. Nordmann comes this recipe for Hallowe'en cookies with smiling little faces. The cookies are wonderfully spicy, easy to make and a treat for grown-ups or children. Mrs. Nordmann will receive a $5 check.

Hallowe'en Cookies

⅓ cup soft shortening
1 cup dark brown sugar, firmly packed
1½ cups dark molasses
⅔ cup cold water
6 cups sifted flour
2 teaspoons soda
1 teaspoon salt
1 teaspoon allspice
1 teaspoon ginger
1 teaspoon powdered cloves
1 teaspoon cinnamon

Mix shortening, dark sugar and molasses well. Stir in cold water. Sift together flour, soda and salt with all or any of the spices listed. (the blend of four makes a good, spicy cookie or you may use just 1 spice.)

Stir the dry ingredients into first mixture to make stiff dough. Chill dough, then roll out ½ inch thick. Cut into 2½ inch rounds. Place far apart on lightly greased baking sheet.

Bake at 350 degrees until cookie springs back at light touch, about 10 minutes. Cool. Frost with:

Easy Orange Icing

Blend 1 cup sifted confectioners' sugar, ¼ teaspoon salt, ½ teaspoon vanilla (or orange juice) and enough liquid (1 tablespoon water or 1½ tablespoons cream) to make of spreading consistency.

Tint with a few drops of orange food coloring. (Combine red and yellow to get orange hue.)

Spread on cookies with spatula or pastry brush. Make faces with melted chocolate, using toothpick for outlining. Makes about 3 dozen.

• • •

Mrs. J. H. Cockrell, 1410 E. Alsobrook Ave., Plant City, won second prize of $2 for three interesting Hallowe'en recipes.

(Continued on Next Page)

BEST RECIPES

(Continued from Page 47)

One is a saucy sandwich, a happy variation of the old peanut butter standby. Next is a juicy salad and last a jack-o-lantern cupcake. Tempting treats, all.

Pumpkin-Head Sandwiches

Use 2 slices of bread for each sandwich, one white and one wholewheat. Spread dark slice with mixture of peanut butter, chopped raisins and nuts, moistened with salad dressing.

Use a sharp knife or small scissors to cut eyes, nose and mouth in the slice of white bread. Place it over the dark slice and round the corners. Keep fresh until serving time by wrapping in a damp cloth and storing in refrigerator.

Hobgoblin Salad

Cut tops from large red apples and hollow out centers. Cut eyes, nose and mouth from side of apples. Fill cavities with diced fruit mixed with salad dressing and then replace the tops as covers. Serve on lettuce.

Jack-O-Lantern Cupcakes

Frost chocolate cupcakes with orange-colored icing. On each, draw a jack-o-lantern face with melted chocolate.

* * *

A three year subscription goes to Mrs. Alfred Sturtz, North Miami, for her frozen orange cream. Note the layer of cream and nuts frozen atop the juice.

Food must be flavorful on Christmas Eve, but homemakers have precious little time to spend upon it.

For that wonderful family time—when the turkey's ready for roasting, the kitchen's filled with tomorrow's plans and time is of the essence—send us a quickie supper menu.

So win a $5 check for your Christmas present with a savory casserole, a rich and filling soup, or a hot sandwich which pleases your family the night before Christmas.

Mail your entry by October 28 to:

Best Recipes
FLORIDA GROWER *and* RANCHER
P. O. Box 2350
Tampa, Fla.

First prize is $5; second prize, $2; third prize, a three-year subscription for yourself or a friend.

Orange Delight

juice of 3 oranges and 1 lemon
½ cup sugar
1 cup cream
⅓ cup powdered sugar
½ teaspoon vanilla
¾ cup chopped walnuts

Strain juice, add ½ cup sugar, put into refrigerator tray; beat cream and add powdered sugar and vanilla. Float cream on top of fruit juice.

Sprinkle nuts on top and freeze quickly without stirring. When solid, cover with waxed paper to prevent hardening too much. Delicious.

SHORT CUTS

(For each Short Cut published, $1 will be paid.)

Stir flour and water with a knife instead of a spoon and it will not be lumpy when used as a thickening agent for gravy or sauces. *R.L.C., Seville, Fla.*

* * *

When laying a floor of asphalt tile, simplify cutting by putting the tile in a bucket of hot water for a few seconds. Remove and find that it cuts easily with ordinary house scissors. *Mrs. V.B., Pinellas Park, Fla.*

* * *

To freshen up tired pearl buttons, paint them with colorless nail polish. *L.V.P., Jasper, Fla.*

* * *

To have extra ice on hand, fill frozen orange concentrate cans with water and place in freezer. They take up little room and maintain a supply for cool drinks. *Mrs. V.J.M., Miami, Fla.*

* * *

If you have vegetable seeds left-over from the last planting, sprinkle a few onto a cotton cloth, roll up cloth and keep it damp and warm for a few days. If the seeds sprout, the batch is still good. If not, new seed is indicated. *Mrs. W.H.H., Lithia, Fla.*

Plentiful Food For October

Broilers, fryers, cheese and apples will head the plentiful foods list for October, according to the Food Distribution Division of the USDA's Agricultural Marketing Service.

Other items on the October plentiful foods list will include beef, pork, medium and small eggs, canned and frozen berries, potatoes, canned ripe olives, honey, and peanut butter.

A clever mind sees another person's problems, but an understanding heart tries to help solve them.

SEWING CORNER

For Grown-Up Dolls

It's time to make a Christmas wardrobe for the favorite doll in the house. Remnants and scraps can glamorize into gilded trimmings with these easy patterns.

You can tailor shirt, slacks, coat, hat, robe, skirt, blouse, slip and dress for dolls sized from 10½ inches up through 22 inches. Think of your own doll's sparkling eyes Christmas morning when she finds this wardrobe for her baby!

Printed pattern 4547: For dolls 10½, 18, 20 and 22 inches tall. See pattern for individual yardages.

Send 35 cents in coins for each pattern; add 10 cents if you want first class (hurry-up) mailing. Send to:

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Print plainly name, address with zone, size and style number.

* * *

"I have an idea she's going to make him a dandy little wife."

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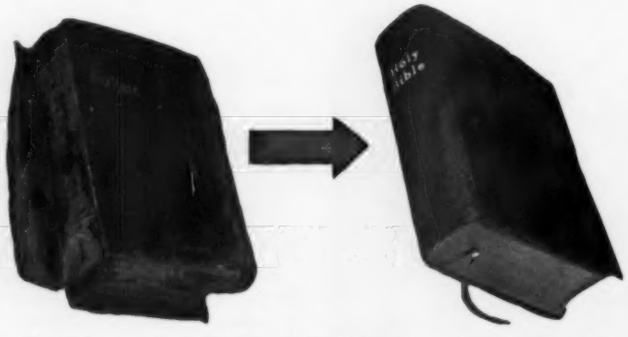

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Youth Has Its Say

"WHICH IMPLEMENT is most useful on today's farm, ranch or grove?", we asked young readers for this month's contest. While the answers were varied, the sturdy tractor and truck took top honors . . . and won $5 checks for their fans.

Interestingly enough, a girl—sixteen-year-old Jane Olive of 1051 N. E. 31st Street, Oakland Park in Broward County—wrote the prize-winning letter about the tractor. She said:

Tractor Fan

"Dear Editor:

The most useful item on the farm is the tractor. It is not only useful for pulling things around, but is used in the fields for plowing. It is the most time-saving device yet invented for the farmer's use. It saves him many steps.

If he didn't have a tractor for plowing, it would take almost three times as long to do the job with a mule. Tractors save a farmer a lot of walking. You can hitch up a tractor to a lot of things a mule couldn't pull.

You also save a lot of money on a tractor. What is a little gas and oil compared to hay for the mule?"

Votes for Trucks

Seventeen-year-old John Gruel of 1001 4th Street N.E., Mulberry, spoke up for the truck. He wrote:

"Dear Editor:

My candidate for the most useful item in the field of agriculture is the truck.

A truck is a workhorse on any farm; farmers depend on it for transportation, recreation, and draft purposes. Engineers have adapted the truck to many tasks including rounding dogies, pulling farm implements and PTO accessories.

Truly, the truck is an asset to the invention of the wheel."

The bands blare, the whistle blows and the pigskin soars off the halfback's toe.

Florida football fields are filled this fall as junior and four-year colleges send their athletes into the fray.

Which college team will be tops in the state by the end of the season?

Your guess is as good as ours—and probably as authenticated as any sportswriter making an early season guess. Pick the winner for our December issue—and win yourself a $5 check for Christmas spending.

To qualify, you must be between the ages of 10 and 20. Send your selection, in not more than 250 words, to:

Youth Has Its Say
FLORIDA GROWER *and* RANCHER
P. O. Box 2350
Tampa, Fla.

Florida Citrus Exchange Reaches Half-Century Mark

FLORIDA CITRUS EXCHANGE, largest fresh fruit sales organization in Florida citrus, reaches the half-century mark in citrus marketing this season.

Modelled after citrus marketing organizations in California, the Exchange was organized in Tampa in 1909 by more than a hundred growers at a two-day convention held at the Tampa Bay Casino.

Chartered in July 1909, the Exchange began its first year of marketing with bewildered growers facing a formidable 6-million box citrus harvest in which a bountiful crop threatened a near-collapse of the industry because of overwhelming sales problems.

During its first year, the Exchange moved 1,250,000 boxes of fruit produced by its members. By the end of its 25th year, the marketing cooperative had sold more than 100 million boxes of Florida citrus.

Today, the Florida Citrus Exchange sells nearly 25% of all fresh citrus fruit leaving the state.

By far the largest marketing cooperative in the state, Florida Citrus Exchange serves its members on an absolute-cost basis. It is controlled by a board of directors made up from the membership.

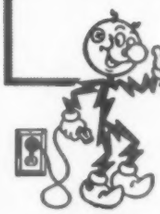
Phil C. Peters of Winter Garden is currently serving as president and chairman of the board.

John T. Lesley, general-manager, supervises the far-flung operation which boasts nine district offices at major market terminals. It also has affiliations with a hundred brokers through the United States and Canada.

Exchange officials point to today's "unchallenged" market for fresh fruit as an indication of the effectiveness of the organization's cooperative system of marketing.

Fresh fruit sales, as a whole, have not enjoyed the tremendous increases of processed products in latter years. Florida Citrus Exchange sales, however, have made steady increases while state totals have decreased.

In Florida, MODERN means ELECTRIC!



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EAR-TAGS, LONG-LIFE, snag-proof, legible 25 feet. Neck Chains, Straps, Anklets. Literature. Bock's Co. Mattoon, Illinois.

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KILL BRUSH at low cost with amazing R-H Brush Rhap. Will not injure grasses, grains, cattle or other animals. See your dealer or write Reasor-Hill Corporation, Box 36X, Jacksonville, Arkansas.

KILL submersed water weeds which foul up motor propellers, tangle fishing gear and choke irrigation ditches with R-H Granular Weed Rhap. Inexpenaive, easy to use, sure results. For details write Reasor-Hill Corporation, Box 36X, Jacksonville, Arkansas.

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Pekingese, Chihuahuas, Collies, Shepherds, Fox Terriers, Pet Monkeys. Pete Motley, Wadley, Ala.

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DAIRY CATTLE registered and grade Holsteins, Jerseys and Ayrshires young imported from Canada officially calf-hood vaccinated result of many years of top breeding. Also Ohio and Wisconsin Holsteins, Jerseys, Brown Swiss and Guernseys. GORDON A. RILEY, Ashland, Ohio, Phone 20611.

Your choice of ten Ayrshire Cows off the milking line of Fall calving cows—price $425.00 each. Wanted small size milk processing plant equipment. Lloyd C. Caswell, Americus, Georgia.

Brown Swiss bull calves, registered or grade, excellent bloodline, call PURITY FARMS, INC., Limona, Florida. Phone 49-4642.

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ANCHOR LANTERN FARM (on tidewater). Ayrshires, Nubians. Hardy, large; good milkers. Francis Gott, Pemaquid, Maine.

300 FANCY HOLSTEIN COWS and Heifers to choose from. Fresh, close up ,and in all stages. You won't find as many good bagged and quality cattle on hand anywhere. See for yourself. Harry Birger Dairy Cattle Co., Rosemount, Minnesota. Phone GA 3-4521.

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WE SPECIALIZE in started Pullets for cage egg producers. Available the year round. We have White Leghorns of the famous Mount Hope Strain, this is one of the oldest high production strains in America. They are medium size Leghorns and adapt themselves readily to cage confinement. We are in position to make delivery of these pullets at different ages up to ready-to-lay. Better still, call and see our newly constructed modern plant in operation. Write or phone us. SUNNYBROOK POULTRY FARMS, INC., Dept. G, Box 468, Route 3, Ocala, Florida. Phone Marion 9-1525, Ray Arthur, Mgr.

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GRANGE Women—Churches, Sunday school classes, PTA's, Cub Scout mothers, auxiliaries, any organization needing money. Sell beautiful nylon handbags and other items. Make excellent gifts. Start early and get your share of Christmas business. Write S. J. Phillips, 24 S. 2nd Street, Harrisburg, Pennsylvania, for details.

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IF YOU WANT to Feel Better Try Queenbee Royal Jelly. Write for Literature. JACKSON APIARIES, Funston, Ga.

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RAISE rabbits on $500 month plan. Plenty markets. Free details. WHITE'S RABBITRY, Delaware, Ohio.

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SONGPOEMS AND LYRICS WANTED! Mail to: Tin Pan Alley, Inc., 1650 Broadway, New York 19, N. Y.

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BARNHART'S LUMBER Yard, 4121 Nebraska Avenue, Tampa 3, Florida. Phone 87-6433. Lowest prices on doors, windows and paint.

GARDEN SUPPLIES

PROTECT YOUR BERRY CROP. Cheese-cloth 150 yards by 36" in convenient 10 yard lengths, $7.50 prepaid. 50% less mill price. MIDCITY, 138 East 34th Street, New York.

Florida Pink: New Gladiolus

A NEW DISEASE-RESISTANT gladiolus, Florida Pink, will be released by the Gulf Coast Experiment Station, Bradenton, to Florida commercial growers this fall.

Developers expect that this variety will largely replace Picardy and boost Florida's per acre production of flower spikes. Its color is similar to Picardy, but darker. The spikes are unusually straight and tall, and ship well.

Dr. R. O. Magie, Gulf Coast Station plant pathologist, says the variety is the first of a series selected from the breeding program for commercial production of flowers in the winter season. It grew from a seed of cream-white Racifica pollinated in 1951 with pink Spic and Span.

Outstanding characteristics are its vigorous growth and ability to produce quality flowers under adverse conditions. But the new variety is not well adapted to the spring crop and is poorly adapted to summer growing in northern states.

Florida Pink produces large cormels (bulblets) which grow vigorously. Usually, the corms are large and distinctly colored.

However, the above statement is not quite true of the corms to be distributed this fall. Last year's cold, wet winter caused them to be not as large or as bright as in past seasons.

An equitable distribution of the 10,000 available flowering - size corms will be made at $25 per thousand for size 3, up to $40 for jumbo. The money will be used to further research in gladiolus breeding and disease control.

Florida Pink is not recommended as a garden variety. Nevertheless, some of the large corms—at the rate of one per person—will be available to Florida gardeners at a cost of $1.

These LAKE GARFIELD trees were planted by John Stenger, Bartow, in February, 1955. They are Queens on rough lemon root and averaged one-half a box per tree last season.

PLACE YOUR ORDER NOW

Due to continued heavy plantings, citrus nursery stock is expected to be in extremely short supply for 1958-59 delivery. We are already sold out of some varieties on some rootstocks. If you are planning to plant a new grove or re-set your old grove this season, we advise that you contact us immediately for your requirements. We also have a limited quantity of registered (certified budwood) trees available in some varieties.

Orders for Contract Budding Accepted

Our Fall budding will begin in October and if we cannot furnish the particular variety and rootstock you need now, we will be glad to bud it to your order. We invite you to visit our nurseries south of Lake Wales and inspect our operations. We suggest you call for an appointment.

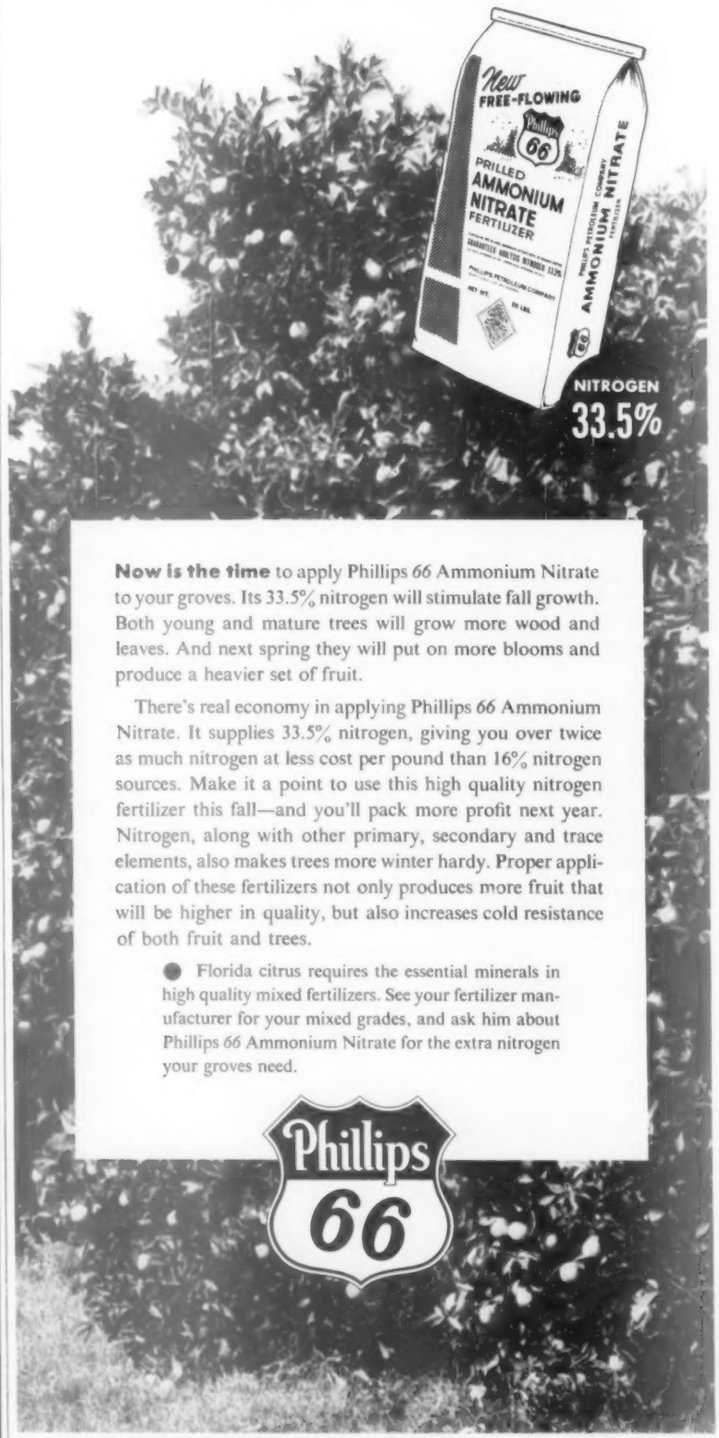
Lake Garfield Nurseries Co.

P. O. Box 154-G
Office: North of Postoffice
230 E. Summerlin St.

Telephones:
Day: 2-4601 or 3-4601
Night: 3-0461 or 2-5511

BARTOW, FLORIDA

Apply Nitrogen Now for a Heavier Set of Fruit Next Spring



Now is the time to apply Phillips *66* Ammonium Nitrate to your groves. Its 33.5% nitrogen will stimulate fall growth. Both young and mature trees will grow more wood and leaves. And next spring they will put on more blooms and produce a heavier set of fruit.

There's real economy in applying Phillips *66* Ammonium Nitrate. It supplies 33.5% nitrogen, giving you over twice as much nitrogen at less cost per pound than 16% nitrogen sources. Make it a point to use this high quality nitrogen fertilizer this fall—and you'll pack more profit next year. Nitrogen, along with other primary, secondary and trace elements, also makes trees more winter hardy. Proper application of these fertilizers not only produces more fruit that will be higher in quality, but also increases cold resistance of both fruit and trees.

● Florida citrus requires the essential minerals in high quality mixed fertilizers. See your fertilizer manufacturer for your mixed grades, and ask him about Phillips *66* Ammonium Nitrate for the extra nitrogen your groves need.

Phillips 66

PHILLIPS PETROLEUM COMPANY
SALES OFFICES:
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Editorial Comment

Sharing With Others

As THE GROWER reaches its 50th birthday we cannot help but feel that it means a lot more than just *our* birthday.

We share it with countless others in Florida agriculture who have gone the long road with us. We especially feel grateful to those contributors who came before us, and we even feel a pang of concern for those who will carry on after we pass from the scene.

If we could offer something to the GROWER and Florida agriculture fifty years from now in the year 2008, or twenty-five years from now in 1983, it would be a rather simple statement: We would remind them that getting helpful information to the Florida farmer is the principle job.

Passing along the fruits of other's labor is the farm magazine's real purpose. The way in which it is done means a lot, but telling the story accurately and on time heads the list. To improve, it is only necessary to dig deeper and faster.

James McComb, Jr., the first Editor of the GROWER, wrote in the first issue published October 2, 1908: "It will be our aim to give the growers all the reliable information we can get, and hope our efforts will result in some good to them."

This is just as simple as anyone could put it.

Nature Lore and Legend

By Ruby Allgood Paris

Horizons ..... Past and Present

STANDING ON THE SHORE, a group of copper-skinned people looked out over the water in astonishment and awe. There, seemingly coming up out of the vast ocean was an unknown billowing monster which grew bigger as it came closer. Then came another, and still another.

Dropping to their knees, the redskins prayed and wept in fear. These people, later to be called Indians by some great mistake of the white man as yet unknown to them, had no way of knowing these "monsters" were the caravels (fast sailing ships) of the 16th Century.

Neither did they know that the very way the ships came into their horizon was the exact cause of the ships' appearance on their distant shore that October morning. Such, however, was the case—because Columbus was admiral of those ships.

Long years before he became a man, Columbus had observed the way a ship comes over the horizon. Pointing this out to his father, he maintained this proved the world was round and not flat.

Columbus had the courage of his convictions. Thus he, by his observations and stubborn will, ploughed his way through the waters to a gigantic discovery of more lands and civilizations that seem to have no end.

Others, centuries earlier, had also believed the world was round. And they, too, were ridiculed as "witless" by their contemporaries.

Thales of Miletus, one of these, was wont to study the heavens to the point of forgetting where he was. Once he fell into a cistern while walking with face upward, his eyes on the stars.

Yet Thales, one of the earliest of the great Greek thinkers, discovered new horizons in mathematics. Perhaps his knowledge of mathematics caused him to think the world round back there some 500 years before Christ.

And when Thales began to develop the practical geometry of the Egyptians into an agency for reasoning, he cleared the way for mathematical theories that guided the first planes—and perhaps the first satellite!

Many others lent impetus to humanity's voyage to great and new horizons. Newton, the founder of calculus, was one of those who made up the top mast of the good ship "Exploration."

While a schoolboy at Grantham, Newton had some trouble with his books. (In fact, he came to fisticuffs with another boy and won.) But he went on to study, and to think his way to the head of the class.

Newton advanced algebra and founded calculus. He also invented and built the first reflecting telescope, using a concave mirror as a lens.

And perhaps, after all, those early laggard years served science a good purpose—as every schoolboy knows, it was Isaac Newton who sat under an apple tree and watched the apples fall.

Observations began at that time served as a starting point in his work of proving that the laws of motion applied to celestial as well as terrestrial objects. These findings stood, unrevised, until the great Albert Einstein broadened their scope in many ways.

Swelling endlessly, the waves of Time's ocean have thrust still others into terrestrial view.

Vibrations made by sounds in the air, for example, were studied by Alexander Graham Bell. Realizing the value of these registered sounds, he sought—successfully—to make further use of this knowledge.

Bell's telephone communication system is now an essential of modern human living. Transmission of the human voice is possible to the far corners of the planet earth—and perhaps even further.

The keel of the ship was laid by many hands:

Long before Gutenberg printed with movable type, ancient Egyptians used papyrus for writing. Clay tablets were crudely engraved centuries before Daguerre learned to picture and hold a human photograph on a negative and tintype. . . .

James Watts harnessed steam. Emma Hart Willard proved that women were capable of higher college learning. . . .

All these, and many more, helped hoist the sails on the good ship "Horizon." In recent years, the tempo stepped up; the plastic age hove into sight. Then came the splitting of the atom.

What, are more ships sighted over the horizon? Stand by, man the telescope.

Heave ho, Cape Canaveral—and Outer Space!

* * *

J. H. Logan Retires

JOHN HENRY LOGAN, Pinellas County Agent for 19 years, retired from the Florida Agricultural Extension Service as of September 30.

A native of Florida, Logan was born in Jackson County. He was raised on the farm which his grandfather settled after coming to America from Ireland.

Logan graduated from the University of Florida in 1925 with majors in animal husbandry and horticulture. After a fling at the real estate business in Tampa, he became assistant manager of a Sarasota County citrus grove.

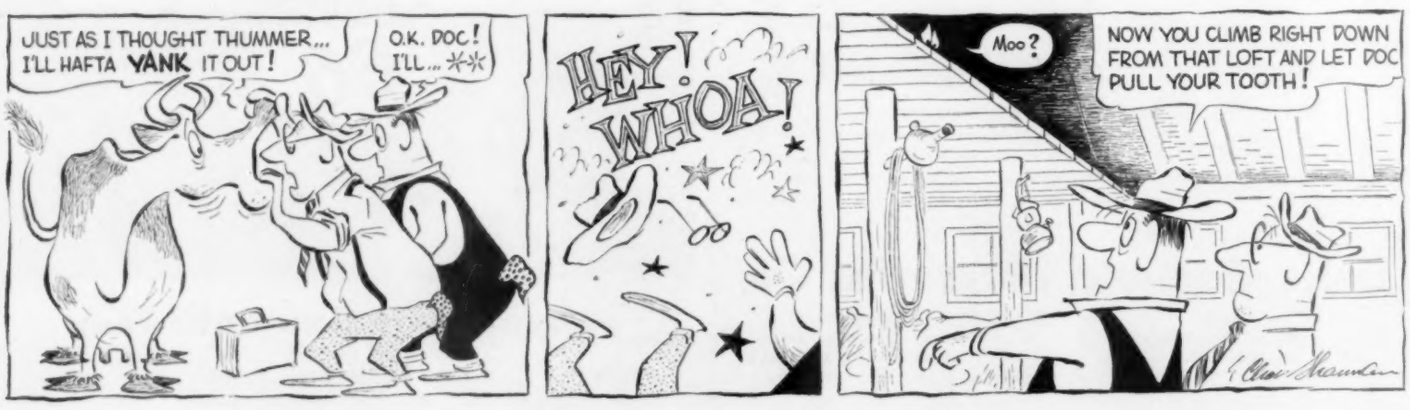
In October 1927, he was appointed county agent for Hernando County. He was transferred to Manatee County four years later; to Pinellas County, in 1939.

Logan has been credited with developing some of the finest dairy herds in Florida through his connections with and service to the local Guernsey Cattle Club. He served as secretary to that group for many years and was active in selecting some of the nation's top Guernseys for sales in this state.

* * *

The number of farm wives working increased from 17% in 1950 to 26% in 1955. For rural non-farm, the increase was from 22% to 24% during the same period. Urban figures show even larger increases.

THUMMER GREEN -- -- - - *SHARMAN*


JUST AS I THOUGHT THUMMER... I'LL HAFTA YANK IT OUT!
O.K. DOC! I'LL...
HEY! WHOA!
Moo?
NOW YOU CLIMB RIGHT DOWN FROM THAT LOFT AND LET DOC PULL YOUR TOOTH!

Farm Income Is Up 11%

During the first seven months of 1958, farmers received $16.6 billion from marketings. This was 11% more than last year.

Prices are reported to have averaged 7% higher; the value of marketings, 4% larger. So states a Demand and Price Situation report of the Agricultural Marketing Service.

Cash receipts from livestock and livestock products of $10.6 billion were 11% more than during the same period of 1957. According to the report, this was mainly because of larger receipts from cattle and calves, hogs, eggs, and broilers.

Receipts for crops totaled $6 billion, a 12% increase. This sum reflected increases in receipts from wheat, corn, citrus fruits, and potatoes.

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has the training . . .

the experience . . .

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to help you produce a

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BIGGER, HIGHER QUALITY YIELD

through a well-advised, profitable fall fertilization and pest control program.

- **X-CEL FERTILIZERS**
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- **TENNESSEE BASIC SLAG**
- **VIKING SHIP BRAND CALCIUM NITRATE**

Call on your X-Cel Man today . . . or write us direct!

X-CEL SINCE 1909 **JACKSON GRAIN CO.**

• FEEDS • SEEDS • FERTILIZERS • INSECTICIDES

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TENNESSEE BASIC SLAG • VIKING SHIP BRAND CALCIUM NITRATE

NEW DYRENE® GIVES OUTSTANDING FUNGUS CONTROL ON TOMATOES AND POTATOES

Produces high quality crop . . . big yield increases compared to other fungicides.

Now you can get increased yields you never thought possible —by using DYRENE, a new and patented organic fungicide recommended for tomatoes and potatoes. DYRENE is the product of five years of cooperative research and field testing and has proved outstandingly effective for the control of early and late blight on tomatoes and potatoes, and anthracnose, septoria leaf spot and gray leaf spot on tomatoes.

DYRENE controls these destructive fungus diseases so effectively that amazing increases in crop yields result from its use. Look at the comparative yields in the table below!

TYPICAL RESULTS OF DYRENE FIELD TESTS

Location	Crop	Material	Yield
Mississippi	Tomatoes	**DYRENE**	**215 lbs. per plot**
	Tomatoes	Tribasic Copper Sulfate	181 lbs. per plot
	Tomatoes	Captan	180 lbs. per plot
Florida	Tomatoes	**DYRENE**	**915 lbs. per plot**
	Tomatoes	Carbamate	317 lbs. per plot
New York	Potatoes	**DYRENE**	**337 bu. per acre**
	Potatoes	Captan	306 bu. per acre
	Potatoes	Check	238 bu. per acre

DYRENE will not harm foliage or affect the flavor or odor of treated crops. And it leaves no harmful residue.

Upgrade the quality and increase the yield of your tomato or potato crop this new and better way . . . with DYRENE. Order it from your Farm Supply Dealer today.

DYRENE A PRODUCT OF **CHEMAGRO**

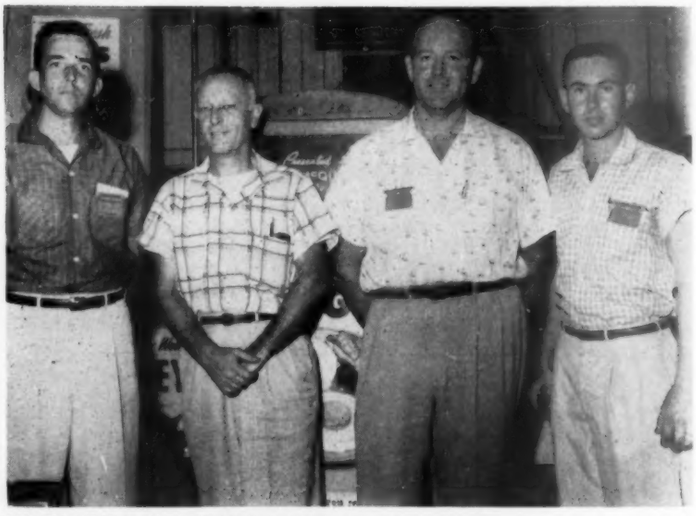
"Chemicals for Agriculture—Exclusively!"

Georgian 'Reassures' Florida Poultrymen About Competition

"FLORIDA POULTRYMEN need not fear competition from Georgia. . . ."

So declared Georgia poultryman H. W. Bennett when addressing the recent Florida Poultry Institute in Camp McQuarrie. However there was a catch in his "reassurances."

Amending his statement, Bennett said Florida poultrymen need not fear *only* Georgia competition. If there is an egg deficit in Florida, Georgia—or some other state—will quickly and gladly send in the needed supplies.



KEY FACTORS in their individual operations were described by four prominent state poultrymen during the recent Florida Poultry Institute at Camp McQuarrie. The panelists, shown left to right, were: John Scussel, Hilliard; Joe Winburn, Jacksonville; Frank See, Miami, and Roger Williams, Gainesville.

But if they can find no market in Florida, Georgia poultrymen will sell their eggs in New York or Puerto Rico or any other place they can unearth buyers.

Even though Bennett minimized the effect of competition from his state, he admitted Georgia is rapidly becoming an export area. No other phase of Georgia agriculture is progressing as rapidly as commercial egg production.

In 1943, there were 463 Georgia flocks that had over 500 birds; only one had 5,000 birds. The gross income from Georgia eggs has increased from $19 million in 1940 to $41,941,000 last year.

Georgia will continue to grow as an egg production state. But so will the southeast as a whole, the speaker declared. He pointed out: "The southeast has the advantage over most other sections in that the price of real estate is low, labor is available, markets are near, feed transportation rates are good, and building costs are less."

Currently, Georgia poultrymen are producing as many eggs as can be consumed in that state, Bennett reported. In the near future, they will have eggs to sell outside their state.

A panel of four prominent Florida producers told the poultry group how they handle their particular operations in order to get the most out of a bird at the least cost.

Many of his operational practices were learned by watching other people, John Scussel reported. He is connected with the Henry Smith Farm at Hilliard which has been in operation since 1926.

During the last four years, the number of birds on the farm has increased and the per-bird profits have decreased. Five years ago, the farm ran some 10,000 layers; the present flock is tremendous and will approach 100,000 within two more years.

As the Smith Farm flock increased, its problems multiplied also. And the problems now need quicker attention, otherwise the losses become larger.

Financing becomes a factor as flocks expand. Smith Farm is contracting for replacement pullets to be grown elsewhere; this is less expensive and insures healthy birds.

The speaker reported they buy feed in large quantities in order to get a better price or discount. A feed station on the farm eliminates the burdensome chore of unloading feed all day.

Smaller poultrymen can probably produce eggs a little cheaper than Smith farm, Scussel conceded. He explained: "Our operation is fast reaching the point of diminishing returns."

Nest profit is continuing to decline. This means the poultryman must continue to grow to make up the difference, stated Joe Winburn representing the Floridandee Farms, Jacksonville.

This large operation used conventional pole type houses which are open on all sides and have shavings on the floor. High houses have

USSR: Union of Silently Swallowed Republics.

Buyers pay top prices for large uniform high quality eggs

RAISE AMES IN-CROSS

and get high production of the eggs that will bring you top prices

In 1957, according to official USDA figures, the price paid poultry raisers for grade A Large eggs was 6c per dozen higher than that paid for Grade A medium. With an Ames In-Cross flock you get more of the kind of eggs that Grade A Large and bring top market prices. Here's why.

High egg quality — Eggs from an Ames In-Cross flock are high in both interior and exterior qualities. The shell is tough, smooth and free of cracks. The interior has a firm albumen. Eggs are free of blood and meat spots. From Ames In-Cross you get the egg quality that *grades A*.

Large, uniform size — The characteristic of desirable egg size has been stabilized and thoroughly tested by the 4-P* program. Every Ames In-Cross bird has this trait. That's why they will consistently lay 80 to 90% Grade A large eggs averaging 24 to 25½ oz. per dozen.

High production — From the inbreeding stage to the final phase of the 4-P program, Ames In-Cross mates and crosses only known high producers. Random Sample tests have proved the high production ability of Ames In-Cross layers. In the Second Intermountain Egg Laying Test Ames In-Cross laid 248.3 eggs per pullet housed.

Other Ames In-Cross features — Ames In-Cross birds give outstanding feed conversion. They'll consistently produce large eggs of high quality on as little as 4.1 lbs. of feed per dozen. You get excellent livability, true hybrid vigor and high disease resistance.

Make your next flock Ames In-Cross, the bird that gives you lots of the eggs consumers want and pay top prices for.

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Hialeah . . . . . Tropical Hatchery

Babcock Bessie

The Leghorn with money making history and still going strong. We hatch them the year around.

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FEATHER HILL FARM

RT. 2, BOX 42

DADE CITY FLORIDA

been found to be better than low ones for Floridandee Farms.

Small nests—eight and one-half inches across the front and 10 to 12 inches deep—have proved more profitable for the Jacksonville operation. They are double decked and placed along the north side of the house so that the eggs can be gathered from the outside.

Although no roosts are used, there is a closing device which serves as a perch for the birds when the nests are shut off. To keep water from freezing during winter months, water heaters are used. An electric shocking device on top of the heaters prevents the birds from roosting there.

Winburn is trying to mechanize the operation to the extent that one man can care for 9,000 to 12,000 birds, with the exception of processing the eggs.

Most poultrymen know what eggs sell for. But relatively few know how much it costs them to produce a dozen eggs.

So maintained Roger Williams, a young Alachua County egg producer. Williams' farm is completely mechanized, and he operates his own feed mill.

(Incidentally, the overall cost per dozen eggs on the Williams farm is 20 cents; feed alone, 15 cents.)

Williams has switched from putting in pullets in spring to summer and fall. By making this switch, he sells his small eggs for as much as large eggs bring in other seasons.

On an average, Williams' production is one dozen of eggs for four pounds of feed.

Use of lights in promoting egg production in his flock was described by Frank See of Miami. Light is one of the poultryman's most important working tools, the panelist declared.

The lights must be above all roost objects in the building. See has lights placed every 10 square feet of floor space.

Lights will not cure diseases or other ailments, See cautioned. And poultrymen must have other factors in good order to properly benefit from the added light.

Spring-hatched birds may require light when 50% production is obtained. This is particularly true when the days are getting shorter. Birds coming into production as days are getting longer need no additional light.

Fall birds coming into production in March and April should get no light until mid-July, when the days are shortening. A 25 watt bulb about one hour before daylight is recommended.

In order birds, the production can often be stimulated by increasing the length of daylight. The rule of thumb (if you can tell when a bird is contemplating a molt) is:

When two-thirds of the eggs are not laid by noon, the time has passed when lights should have been increased.

Molts start around the neck. But if they can be stopped at that stage, the birds will not go into full molts.

Florida's only egg-vending machine owner, R. C. McKelvey of Fort Myers, spoke very highly of the new selling technique. Maintenance of egg quality and flavor plus the convenience of selling were listed as the favorable factors in vending machines.

Eggs placed in vending machines must be of top quality, McKelvey emphasized. While the convenience of being able to get eggs in the middle of the night will bring customers occasionally, it is top quality that brings them back as regular customers.

Heavily traveled highways are not good places for vending machines because people do not like to fight traffic. Yet it is possible to have the machine too far in the country.

If the location is on a road that has non-farm traffic, it is more advantageous to have the machines near the farm than in heavily traveled areas. The psychology of having the vendor close enough to the hens so the customers can hear the cackle will greatly offset the lack of personal contact between the customer and seller.

Cornell University made a study of 18 vendors in New York State. It was found that on-farm locations averaged about two and one-half times as many eggs sold a week as locations at other points.

The study also revealed that the break-even point on farm locations as three and one-third cases of eggs weekly. It cost $17 to operate a vending machines on the farm while non-farm locations were not profitable.

HOW CARS HAVE CHANGED! This *1908* model was the last word in vehicular transportation the year Florida Grower and Rancher (first called Florida Fruit and Produce News) was founded.

"I hope you don't drive this way taking eggs to market."

KimberCHIKS® LAY WELL IN VARIED ENVIRONMENTS

Rank of nationally sold chicks in 1956-57 tests

(Based on income over feed cost except in N. Y. C. and Missouri.)

Entry	Calif.	Mo. "B"	N.Y.C.	Tenn.	Utah*	Ave. Rank
Kimber K-137	4	4	6	5	2	4.2
Strain A	3	10	—	10	1	6.0
Strain B	11	16	2	3.5†	4	7.3
Strain C	5	18	18	12	5	11.6
Strain D	—	6	24	—	10	13.3
Strain E	38	3	25	15	3	16.8
Strain F	23	20	—	7	18	17.0
Strain G	—	25	27	11	13	19.0

*Incomplete. †Average of 2 entries. ‡Income over feed and chick costs.

K-137 entries ranked FIRST IN NET INCOME among all nationally sold chicks entered in three or more of the above tests. *The average net income from Kimberchiks was 56¢ higher than the average of all entries.* Such consistent, profitable performance in a wide variety of environments should encourage you to order K-137 Kimberchiks this season.

WE ALSO HAVE STARTED PULLETS.

BLOOMINGDALE POULTRY FARM & HATCHERY

Rt. 2, Box 374 Valrico, Fla.
Tel. Tampa 49-3054 - 49-1033

DEKALB SCIENCE
makes the Difference
DEKALB RESEARCH produces BETTER CHIX for BETTER PROFITS
DR. E. E. SCHNETZLER
DeKalb's gigantic and outstanding program of inbreeding, crossing, selection and testing is under the direction of this Nationally prominent poultry geneticist.
DR. DEAN JONES
Trained at Purdue and Cornell Universities, Dr. Jones has been ably assisting in the constant and intensive search for better and better layers.
DR. W. E. BRILES
Educated at Wisconsin University and on the staff at Texas A & M, Dr. Briles is recognized as one of the leading authorities in the genetics of blood grouping.
DEKALB CHIX are Bred for these "Profit-Factors"
LIVABILITY
DeKalb hybrid vigor along with careful selection and testing for good LIVABILITY, has not only resulted in a laying hen noted for its long laying life, but also for baby Chix that are known for their LIVABILITY factor.
FEED CONVERSION
Bred to convert feed to eggs with a good margin of profit for the poultry flock owner . . . that's DeKalb Chix. Yes, here is where you can separate "run-of-the mill" birds from top quality layers like DeKalb Chix.
LAYABILITY
DeKalb poultry geneticists must and do, seek the best combination of all "profit" factors. High egg production is one of them. Winter's cold and Summer's heat often fail to disrupt steady, high DeKalb egg production.
EGG QUALITY
If you're tired of gathering weak, thin shelled eggs, or eggs with less than superior interior quality, get a flock of DeKalb Chix. Because of high-standing yolks and thick whites, DeKalb eggs make the ideal market eggs.
DEKALB AGRICULTURAL ASSOCIATION, INC., DEKALB, ILL.
If You Keep Records, You'll Keep DEKALB CHIX

Formulative Years

(Continued from Page 39)

behind the idea. The railroads liked the summer excursion suggestion. And, in the end, our first Mid-Summer Number went to press in mid-July—a *sixty*-page paper!

My success, which would not have been possible except for the cooperation of many friends I had made throughout the state, resulted in my being taken out of the circulation department and made assistant to advertising manager B. L. Hamner.

A bit cocky over my success, I advanced the idea of a Mid-Winter Number and was given the go-ahead. It turned out even better, a 80-page issue.

Each year after that, we put out a Mid-Summer Edition in July and a Mid-Winter Issue in February. The last two years of these efforts saw the production of the largest farm journal—from the standpoint of number of pages and volume of advertising—in the U. S.: 116 pages for two consecutive years.

Another record achieved by the FLORIDA GROWER during the period I served on the magazine was the publication of the largest single advertisement ever run by an agricultural journal: 16 full pages by the Buckeye Nurseries announcing the "Temple Orange." This ad was in two colors, another innovation.

Growth of the publication and need for larger quarters an better printing facilities brought a decision to establish our own printing plant. This was accomplished through the leasing of a suitable building and installation of a modern print plant capable of not only printing the FLORIDA GROWER but handling job-printing as well.

So successful was the operation that it was not long before the decision was made to build a building in a more desirable location to house both the publication and printing department.

Desirable property was purchased on Grand Central Avenue in Tampa. Here was erected an attractive building which still houses the publication and printing plant today.

FLORIDA GROWER PRESS, as the printing department was known, specialized in agricultural printing. Millions of multi-color box end labels for citrus and vegetable packages, as well as large quantities of forms used by growers and packing houses, were printed each year.

When he resigned to become secretary of the Tampa Board of Trade, I succeeded B. L. Hamner as advertising manager. I held this post until Edgar Wright retired in 1925, when I was appointed editor and general manager by the board of directors.

I held this office until the Florida Citrus Exchange sold controlling interest in the publication to a group headed by Charles G. Mullen Sr. and Marvin Walker.

Growing with Florida, the FLORIDA GROWER has held its position as this state's leading agricultural journal. Under the able management of the Mullens', facilities have been increased as the needs demanded and the FLORIDA GROWER is still the "Bible" of Florida agriculturists.

* * *

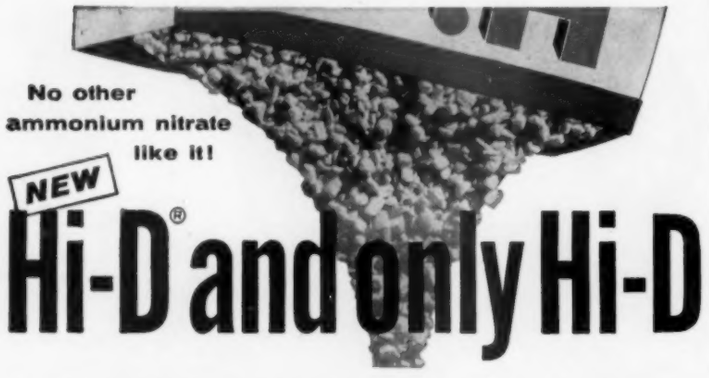
THE FLORIDA GROWER staff members and Grower Press office personnel posed in front of their brand-new building in January 1923. That's Russell Kay (fourth from right) with his foot propped up on the porch wall.

Future Power?

"Green scum" seen on bodies of stagnant water may someday heat houses or run cars.

The Florida Farm Bureau learned recently that researchers in California found that one pound of dry algea could produce electricity to operate the average house for an hour; that a ton could be converted into 45 gallons of gasoline.

Admittedly, this isn't practical for use today. But with possible future shortages of natural resources, it does have possibilities.



No other ammonium nitrate like it!

NEW

Hi-D® and only Hi-D

offers all of these important benefits

Most fertilizer manufacturers in Florida are now using Hi-D Ammonium Nitrate in their mixed fertilizers. Hi-D is made by an exclusive process and represents the latest development in nitrogen fertilizer. Shown below are the many benefits you get when Hi-D is used in mixed goods. For example, the special shape of Hi-D granules insures even distribution of nitrogen in the mix. And these strong, dry granules resist breakup during handling, flow freely even on hot, sticky days. Mixed goods containing Hi-D provide two kinds of nitrogen – nitrate and ammoniacal. The next time you buy mixed fertilizer, ask about Hi-D.

1. Super Dryness.
A patented manufacturing method removes all the moisture from Hi-D *before* the granule is formed.

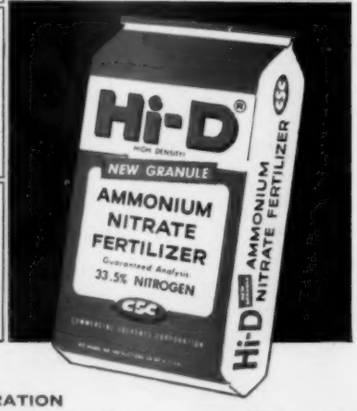
2. High Density.
Because of this new process, each Hi-D granule is of unusually high density. These hard, non-porous granules tend to lock out moisture, even under humid field conditions. Hi-D is *made dry*—and *stays dry.*

3. Special-Shape Granules.
Note the magnified granule. The unique shape and size of Hi-D granules are controlled so that distribution is even and accurate in all types of spreading operations.

4. Free Flow.
Hi-D flows freely even on hot sticky days. Because of its super dryness, high density, and special shape, Hi-D doesn't gum-up, doesn't stick, clog, cake or bridge.

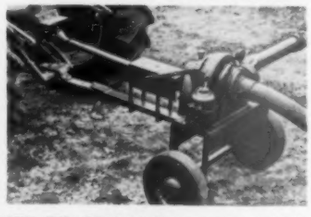
5. Two-Speed Fertilizer Action.
Hi-D supplies a total of 33.5% nitogen in two equal "servings." 16.75% is *nitrate* nitrogen that's immediately available, 16.75% is *ammonia* nitrogen for follow-up feeding during the growing season.

6. Guaranteed To Store a Full Year.
Made dry. Delivered dry. *And stays dry.* So much so that Hi-D is *guaranteed* to store well, under normal conditions, for one full year.



COMMERCIAL SOLVENTS CORPORATION
Sterlington, La. • St. Louis, Mo. • Atlanta, Ga. • Terre Haute, Ind.
CSC also produces BACIFERM® Bacitracin Antibiotic Supplements and PEAK® Anti-freeze

NEW FROM HALE



NEW "TRACTOR-MATE"—A PTO Irrigation pump. The 3PTF is a trailer-mounted power take-off pump (shown above) and is ideal for irrigating medium acreage—or as a booster for your present system. At 550 RPM it will pump 350 GPM at 80 PSI.

NEW "FZ" PORTABLE—With newly designed aluminum body, this rugged yet lightweight pump "packs a volume punch." Unit is well suited for irrigating small acreage. Weighs only 148 lbs. Pumps 150 GPM at 52 PSI.

NEW "TORRENT"—A self-priming portable with a thousand uses around the farm such as small irrigation jobs, stand-by water system and emergency fire fighting. The "Torrent" pumps over 7000 gallons per hour!

Please send details on the THREE New HALE Pumps and the complete line of HALE Irrigation Pumping Units.

Name _____
Address _____
Water Source _____ No. Acres _____
IRRIGATION DIVISION DEPT. FG

HALE FIRE PUMP CO. CONSHOHOCKEN PA

Vegetable Growers Can Expect Better Season

FLORIDA'S commercial vegetable growers have reason to hope for a satisfactory producing and marketing season this winter and next spring.

Such is the opinion of the vegetable outlook committee, composed of staff members of the University of Florida Agricultural Extension Service and Experiment Stations and the USDA crop reporting service.

Vegetable outlook information—which gives detailed acreage recommendations and background information—for the coming fall, winter and spring seasons has been compiled and issued by the Extension Service.

Copies of the vegetable outlook are available from county agents.

Decreases in acreages, as compared with last season's planted acreages, are recommended by the committee in a majority of the vegetable crops. The group recommends major decreases for:

Celery, spring crop sweet corn, cucumbers, eggplant, endive and escarole, potatoes, tomatoes (mostly winter and spring), and watermelons.

They suggest minor decreases for beans, cabbage and squash; about the same acreage in lettuce and peppers (increase in fall, decrease in winter and spring pepper crops).

Material increases are suggested for spring cantaloupes and strawberries. Minor stepping up of acreages of lima beans and cauliflower is recommended.

Consumer expenditures for fresh foods should not decrease, thereby assuring a good demand. Dr. F. S. Jamison, head of the University of Florida vegetable crops department says:

"Prices to Florida vegetable growers will continue to be strongly influenced by the quality, quantity and timeliness of supplies from Florida and competing areas."

Supplies of machinery, fertilizers, pesticides, seeds, containers and other production materials appear ample for the coming season, Dr. Jamison adds. He believes:

"With the continuing increased demands for Florida-grown vegetables during late fall, winter and spring months, with a favorable economic climate prevailing in the large market areas, with a return to more nearly normal weather, and by exercising restraint in acreage expansion and reducing acreage where indicated, growers should experience a most successful season."

"I see your wife's family is still visiting you."

STATEMENT OF OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY ACT OF CONGRESS OF AUG. 24, 1912.

Of the Florida Grower and Rancher, published monthly at Tampa, Florida for September 5, 1958.
State of Florida
County of Hillsborough: SS.

Before me, a Notary Public, in and for the State and County aforesaid, personally appeared Harris H. Mullen, who, being duly sworn according to law, deposes and says that he is Publisher of the Florida Grower and Rancher and that the following is, to the best of his knowledge and belief, a true statement of the ownership and management, etc. of the aforesaid publication for the date shown in the above caption, required by the Act of Congress of August 24th, 1912, embodied in section 443, Postal Laws and Regulations.

That the names and addresses of the publisher, editor and manager are: Publisher: Harris H. Mullen, Tampa, Florida; Managing Editor, Alice Tompkins, Tampa, Florida; Business Manager, Chas. G. Mullen, Jr., Tampa, Florida.

That the owners are (names and addresses of stockholders owning or holding 1 per cent or more of capital stock):

Florida Grower Publications, Inc., Tampa, owned by Florida Grower Press, Inc., Tampa.

That there are no bondholders or mortgages.

(Signed) HARRIS H. MULLEN

Sworn and subscribed before me this 5th day of September, 1958.

(Seal) MRS. B. M. BUSUTTIL

Notary Public for the State of Florida at large. My commission expires December 18, 1961.

Our specialization means greater profits for you

Sixty-five years of intensive research by the Waldo Rohnert Company has resulted in seeds of virility for healthy, profitable crops. Recognized leaders in the vegetable seed field, the Waldo Rohnert Company has an enviable record of pioneering.

Here's the Rohnert Detroit dark red short-top beet, mildew resistant, uniform in size and rich interior color, and tested for superior canning quality.

Ideal for canning, home gardening or fresh marketing, it is a typically fine product of Waldo Rohnert Company's sixty-five years of specialized vegetable seed research.

Only the specialist in seed can provide you with the finest seed, seed developed for maximum yield and greatest marketing profit. Waldo Rohnert Company is *the* recognized specialist in fine vegetable seed.

Available through authorized distributors and their dealers

WALDO ROHNERT CO.
HOLLISTER, CALIFORNIA

BEET • CARROT • CELERY • CHICORY • CABBAGE • CELERIAC • CHARD • CORIANDER • DILL • ENDIVE • LEEK • LETTUCE
MUSTARD • ONION • ONION HYBRIDS • PARSLEY • PARSNIPS • RADISH • RUTABAGA • SALSIFY • TURNIP

the aim of
Dundee RANCH

KINLOCHIAN 9851st

The basic principles of Dundee Ranch are to produce top Angus cattle. This is being illustrated by the continued use of Kinlochian 9851st and Kinlochmere 68 plus our young Scotch calf coming on —Perthonian 3.

Here at Dundee we are culling our cow herd—keeping only top producers—because we believe in the cattle business in the South, and resolve never to sell animals as purebreds unless we feel they are worthy as such. That is why all animals are sold with a guarantee.

Certified T.B. and Bang's Tested Herd

You're always welcome at . . .

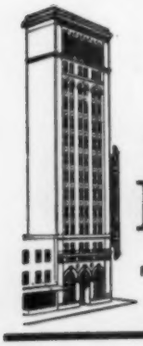
Dundee RANCH
Lake Fern Road • Lutz, Florida • Ph. Tampa WEbster 9-5201
RALPH J. and GWEN CORDINER, Owners • CHARLES H. MOORE, Manager

This Banker is
AT HOME ON THE RANGE

The tanned young man in the muddy boots is far from the conception most folks have of a banker . . . but he is. Bob Morris is First National's agricultural representative . . . a man who lives most of his job hours out in the sun, and loves it.

Most cattlemen and growers 'round this area know Bob Morris, because he really gets around . . . gathering valuable information at meetings and out-in-the-field sessions. He knows the problems of Florida's ranchers and growers, and many times has the solutions.

Need help? See Bob Morris at the First National Bank of Tampa. He'll lend a hand financially *and* share the wealth of his information and experience.



the **This is the bank to *Grow* with**
First National Bank *of Tampa*
FLORIDA'S OLDEST NATIONAL BANK
MEMBER: FEDERAL DEPOSIT INSURANCE CORPORATION

Lime and Dolomite in Florida During the Past 50 Years

By O. C. BRYAN
Technical Director
Soil Science Foundation
Lakeland, Florida

FAVORABLE RESULTS with dolomite on citrus, pasture, truck and other crops in the middle thirties was a case where practice preceded theory.

Yet, it was history-making in Florida agriculture. *This material paved the way for a more successful agriculture than the state had ever known.*

It is doubtful that any commodity has done more for the agriculture of Florida during the last half century than dolomite. It furnished an economical source of needed calcium and magnesium, without adversely affecting the trace elements.

Use of dolomite and lime tonnage has increased from almost nothing in 1930 to approximately one-half million tons in 25 years.

The history of agricultural lime in Florida has been somewhat mysterious, not duplicated in any other state.

Its early use on acid soils met with disappointment. Although certain limestone soils in France and elsewhere were known to be unfavorable to some crops, lime on acid soils presented a different problem.

History had shown for centuries that soil fertility centered around adequate lime, native or applied. And repeated records revealed that productive soils contained more active, available calcium than the combined amounts of all other nutrients.

Consequently the depressing effects of lime on Florida soils were not only discouraging by mysterious, especially on acid soils of low productivity. These adverse records were called to the attention of the officials of the Florida Agricultural Experiment Station about 1912.

Special investigations by the officials confirmed the unfavorable reports from farmers and growers. They also failed to account for the unhealthy and depressed condition of crops following the use of lime.

As a result, a strong feeling developed against its use in Florida around 1918. This feeling prevailed until the late thirties.

**(Agricultural lime is made by grinding lime rock, which is largely calcium carbonate. Dolomitric lime (Dolomite) is a form of lime containing magnesium carbonate (30-42%).)*

Official records of the Florida Agricultural Experiment Station between 1917 and 1926 showed distinct depressing effects of lime on many crops. Further mystery was added to the confusion because some soils in the state—having considerable lime as carbonates—were known to be producing normal crops.

But the overall records clearly indicated that many Florida soils were acid and in need of amendments to boost production. The response to normal fertilizers was not always good, and lime aggravated the condition.

Therefore farmers and growers resorted to the use of hardwood ashes, bonemeal, raw phosphate and amendments other than lime.

When hardwood ashes and bonemeal became scarce and too costly, most of the fertilizing manufacturing companies in the state prepared special soil amendments as substitutes because of the acute need for relief.

Usually these amendments carried hardwood ashes, rock phosphate, bonemeal, etc., diluted with lime. And usually they gave favorable results.

Consequently the direct use of agricultural lime remained very low until the forties. Yet, some few growers and technical workers used limited amounts with varying degrees of success:

A coarse grade of lime known as "screenings," slower acting and causing less crop injury, gained some favor in the thirties. But they did not receive official approval.

The widespread problem of "bronze leaf" or "copper leaf," associated with stunted and unhealthy citrus trees, was acute in the late twenties and early thirties. Other abnormal conditions seemed to increase from year to year.

Farmers and growers were discouraged and alarmed. No records pointed to much relief.

The solution to the mysterious lime problem in Florida stems from a series of soil amendment tests inaugurated by the Agricultural Extension Service of the University of Florida in 1932.

One of these amendments was dolomitic limestone imported from Tennessee. The results of these tests were not only revealing but history making.

As had been reported for many

years, the response from the regular lime treatment was depressing. The response to the raw phosphates was somewhat neutral.

But responses from dolomite were favorable and surprising. It was a limestone, yet showed beneficial results—and the "bronze leaf" pattern so common in groves cleared up.

The favorable response from dolomite and other sources of magnesium attracted wide attention in 1935. As a result of these and other demonstrations, dolomite became popular almost by magic, marking the turning point regarding the use of lime in Florida.

Since these demonstrations had not stemmed from research, there was grave doubt among some technical workers regarding their acceptance.

For one thing, the role of magnesium had been overlooked in the fertilizer program. Furthermore, dolomite was a form of lime after all . . . and lime had experienced ill-repute for many years.

Due to the unfavorable results with lime and the doubt regarding the use of magnesium, state officials felt it necessary to re-study the problem.

Grower and farmer interests were increasing rapidly also. Consequently, experimental studies—using varying amounts of lime, dolomite and soluble magnesium to determine the extent of toxicities and practical use of these materials—were inaugurated at the Citrus Experiment Station in 1937.

Controversy regarding the use of lime and dolomite was acute following the outstanding responses to the demonstration tests in the middle thirties.

For that reason, Dolomite Products—one of the state's largest producers of lime an dolomite—inaugurated a series of studies to determine the practical use of dolomite in Florida, and whether or not its continued use would lead to trouble.

These studies included a wide range of soils, crops and groves receiving excessive amounts of dolomite. Since these extreme rates produced no unfavorable results over a period of three years, the tension was reduced; everybody felt relieved.

Other studies revealed that dolomite did not raise the soil PH as high as did regular lime. This gave added favor to the use of dolomite.

Following the discovery of the nutritive value of trace elements in the late twenties, it was soon shown that lime lowered the availability of iron, manganese, zinc and other nutrients in the soil, thereby accounting for the mysterious problem long associated with lime.

This brought relief and gave favor for the use of lime. The toxic theories regarding dolomite and lime faded rapidly.

Farmers and technical workers now realize more clearly that a rational use of dolomite and lime is fundamental for successful agriculture on most Florida soils.

* * *

Last year, for the first time in history, U. S. consumers spent more than $6 billion for fresh fluid milk. The 1957 fluid milk sales amounted to $6.23 billion, an increase of $289 million or 4.8% over 1956 sales.

* * *

Since World War II, business and industry have spent some $300 billion for new plants and equipment.

IDEAL FOR FLORIDA SOILS AND CLIMATE

Yes, Chilean is the ideal fertilizer for Florida's soil and climate. You can be confident of maximum yields and highest quality fruit with Chilean Nitrate of Soda. Its nitrogen is *100 per cent nitrate nitrogen*—fast-acting, efficient, and dependable.

If you have any doubts about the value of a high nitrate nitrogen program... we suggest you set aside a block of trees and use Chilean as your sole source of nitrogen on them. Compare them with the rest of your grove and convince yourself.

In addition to its vital nitrate nitrogen, Chilean contains sodium and beneficial minor elements. Soil acidity is a problem in many groves, therefore, the sodium in Chilean Nitrate is important. It is highly mobile – moves downward rapidly to destroy acidity in both top- and sub-soil . . . helps maintain a desirable pH level; conserves soil supplies of available potash, calcium and magnesium. It increases the availability of phosphate in the soil and therefore improves the efficiency of mixed fertilizers containing it.

Chilean Soda is a rare natural combination of nitrate nitrogen for fast action, sodium to destroy acidity and minor elements to guard against "hidden" plant food deficiencies. Straight or in mixed fertilizer, specify Natural Chilean Nitrate of Soda.

NATURAL CHILEAN NITRATE OF SODA

The most profitable peppers and tomatoes you can grow

Your pepper or tomato crop can only be as vigorous and productive as the seed from which it grows. Grown in the rain-free summer climate of California, the healthiest and cleanest of seed you can plant is produced by the Clarence Brown Co., recognized as the leading specialists in these important crops for more than three decades.

For surer profits, buy the best . . . Clarence Brown specialized Pepper and Tomato strains.

Available through authorized distributors and their dealers.

Clarence Brown Co.

GENERAL OFFICES: MODESTO, CALIFORNIA
RESEARCH OFFICES: SAN JUAN CAPISTRANO, CALIFORNIA

Manganese gives citrus fruits greater resistance to frost and flash freezes. Use **tecmangam** ...an economical source of manganese. Apply as spray or fertilizer mix

Citrus fruits need manganese. This vital element helps trees resist low temperatures and produce top-quality fruit high in Vitamin C content.

Tecmangam contains 75-78% manganese sulphate. Easy-to-handle and completely soluble, Tecmangam can be used in nutritional sprays or in dry fertilizer mixes.

Tecmangam is available in bags from your local fertilizer distributor. Carload quantities are shipped directly from

Eastman
CHEMICAL PRODUCTS, INC.
KINGSPORT, TENNESSEE
subsidiary of EASTMAN KODAK COMPANY

Citrus CLOSE-UPS

By FRED P. LAWRENCE
Citriculturist
Florida Agricultural Extension Service

Cultivation Time There are several reasons growers should cultivate at this season. Mainly, they should do so to eliminate all cover crops and weeds which might interfere with cold air drainage during the fall and winter months.

Cultivation also removes plants which would otherwise compete with citrus for moisture during the dry season. In addition, it enables grove hands, fertilizer distributors and fruit pickers to do a better job —more safely.

Disking and plowing are used interchangeably for this purpose; disking is a little less expensive. When the cover crop is chopped down, disking should incorporate this material into the soil sufficiently to eliminate any fire hazard.

Extensive cultivation is not warranted—especially around young tree where wind erosion and "sand-blasting" may become a problem in the March winds.

Young trees should be hoed and thoroughly cleaned of all grass and weeds this month as they will need to be banked during the first 15 days of November. Clean soil for the banks lessens the possibility of termite infestation and "sweating" in the bank.

Fertilizer Records show that the fall application of fertilizer determines to some extent the bloom and set of next year's crop of fruit.

Normal bearing trees—that is, those not seriously damaged by last winter's cold—need to be fertilized at this time.

Fire Lanes Groves should have fire lanes as guards plowed around them in the fall. This should be done especially along right-of-ways and in those

THIS IS WHY the best growers use GULF Fertilizer

Gulf Field representative Lamar Hearn, right, is shown paying one of his regular visits to Dr. A. B. Floyd, Bradenton Citrus Grower. Florida growers and farmers depend on Lamar's know-how in their problems concerning soil conditioning, fertilization and pest control. And for best yield, they depend on Gulf Fertilizer—formulated for Florida soils.

THE GULF FERTILIZER COMPANY
Tampa, Florida

FRIENDLY GULF FERTILIZERS and pesticides

SERVING FLORIDA AGRICULTURE FOR 55 YEARS

places where the cover crop is not thoroughly incorporated into the soil..

Caution: Poison! An average Florida grower probably uses more pesticides than any other producer of agricultural products in the country.

Research has developed ways of controlling most of the destructive insects, weeds, diseases, and other pests that thrive in our semi-tropical climate. These important farm tools must be used in a proper and safe manner.

Farmers and ranchers have the responsibility of avoiding injury to themselves, their families, and their neighbors. In addition, they must avoid unnecessary contamination of the food they produce.

Accidents involving pesticides can be attributed to five main causes:

1. Improper storage (leaving pesticides exposed to children and irresponsible persons).

2. Failure to read and follow rules for use.

3. Improper disposal of empty containers.

4. Negligent application of pesticides.

5. Failure to observe personal hygiene at the time of handling and afterwards.

According to the World Health Organization of the United Nations, some 2,500 deaths have occurred in recent years from the use of agricultural pesticides. Careful examination of the records shows about 65% of these deaths could have been avoided had the user taken a few minutes to read-and follow-directions on the label.

Twelfth Annual Seminar The 12th annual Indian River Citrus Seminar, sponsored by the Indian River Citrus League and conducted by the Agricultural Extension Service, will be held in the Community Center in Vero Beach on October first and second.

This year's program offers a change of pace: In addition to the customary 30-minute presentations, there will be a number of three, five and ten-minute summary reports of research findings, grower practices, and recommendations.

Bob White, economist with Florida Citrus Mutual, will be the opening speaker. He will report on "Competition for Florida Citrus." Other reports of considerable interest to growers in coastal areas are scheduled.

We are also pleased to report that members of the Florida Citrus Production Managers' Association will be among our guests for this program.

* * *

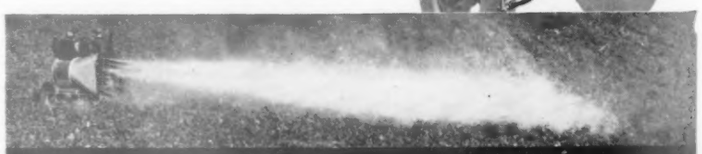
There are only two kinds of people in this world—those in the swim and those in the soup.

* * *

One sure test of will-power is to see a friend with a black eye and not ask any questions.

SPRAYS AT THE RATE OF

24 acres per hour



new John BEAN 15-RC AIRCROP

With the John Bean 15-RC Aircrop installed on your high pressure sprayer, you'll spray up to 60' swaths and do a thorough job at the rate of 24 acres an hour at a 4 mph tractor speed. Just estimate your savings in time and labor over boom-type spraying!

The 15-RC's 29" axial flow fan delivers 31,000 cubic feet per minute at a velocity of only 70 miles per hour. This low velocity, plus the exclusive design of the discharge head, provides uniform coverage over the entire width of swath without damage to crops.

And see how these other Aircrop features will speed your spraying job: (1) Entire unit rotates in a 200° arc to take advantage of wind direction (2) Rotation and internal deflectors controlled from the tractor seat (3) Water hauling reduced ½ to ¾ by use of concentrates.

For small to medium acreage, there's the economical Model 8-RC Aircrop. Sprays swaths from 30 to 40 feet wide. Has 21-inch axial flow fan and 180° rotation.

Now you can get both...

QUALITY and ECONOMY

IN A TRAILER OR TRACTOR MOUNTED FARM SPRAYER

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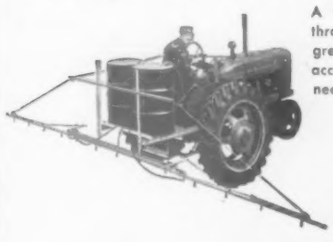

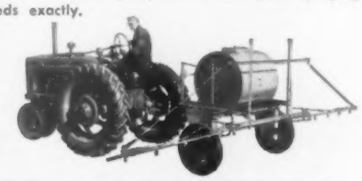

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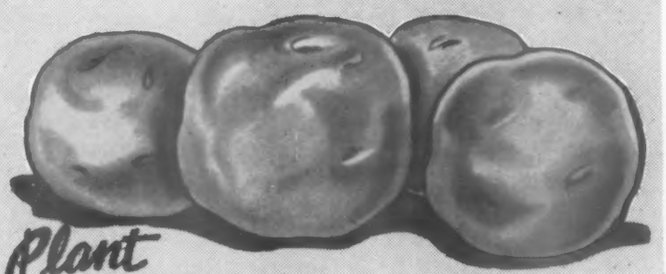

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